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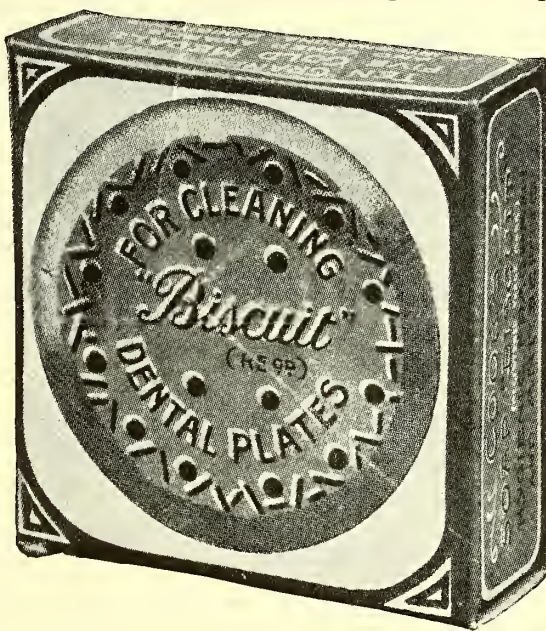


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INDEX TO ADVERTISEMENTS IN THIS ISSUE.

HEAD OFFICE : 42 Cannon Street, London, E.C. Telegraphic Address : "CHEMICUS, CANNON, LONDON." Telephone No. 852 BANK.  
BRANCH OFFICES : MELBOURNE, SYDNEY, AND ADELAIDE, AUSTRALIA.

The Arabic numerals (1 to 32) in this Index refer to Advertisements in front of the literary pages, the  
Advertisements following the literary pages are numbered in Roman numerals (i to xii).

Page	Page	Page	Page
Artight Capsules Co., Ltd. ....vi	Crawshaw, E., & Co. .... 24	Kutnow, S., & Co., Ltd. .... 15	Schmitt & Wildenhayn .....viii
Abastine Co. (British), Ltd. 23	Cupal, Ltd. .... 32	Kyho Proprietary, Ltd. .... 27	Scientific Truss Co., Ltd. ....x
Alexandre, L. .... 25	Cuxson, Gerrard & Co., Ltd. ... 19	Lascol Perfumery Co. .... 17	Scott, A. .... 14
Alan, A. E. .... 25	Davis, J. M., & Sons .....xi	Levermore, A., & Co., Ltd. ... 24	Sharman's Patent Syphon
Alcock's Plasters .....xi	Dodge & Olcott Co. .... 30	Lilywhite, Ltd. .... 19	Co., Ltd. .... 28
Allen & Hanburys, Ltd. ... Cover	Duncan, Flockhart & Co. ....iv	Lindner, M. .... 19	Shirley Bros., Ltd. .... 24
Almance Drug & Chemical Co. ix	Edwards' Dental Manfg. Co.,	Liverpool School ..... 12	Sim, Ltd. ....iv
Alison, B. .... Col. Supp.	Ltd. .... 20	Lothouse & Saltmer, Ltd. .... 26	Sinalco Co. .... 29
Apollinaris Co., Ltd. .... Cover	Ellison, H., Ltd. .... 25	London College of Chemistry 12	Singleton & Cole, Ltd. .... 24
Arthur & Co. .... Col. Supp.	Exchange Column .... Col. Supp.	London Hygienic Chemical Co. 22	Smith, J. H. & Co. .... 22
Atkinson & Barker .....viii	Expurgo Manfg. Co. ....vii	London Proprietary Co. ....vii	Smith, T. & H., Ltd. .... 26
Baker Parson C. .... Col. Supp.	Fairchild Bros. & Foster ..... 32	Lorimer-Marshall, Ltd. ... Cover	Solazzi Liquorice Juice ..... 26
Barclay & Sons, Ltd. .... 9	Faulding, F. H., & Co. .... 29	Maw, S., Son & Sons ..... 11	Solport Bros. .... 18
Barker, R. W. .... Text 252	Fentiman, A. G. .... 24	May, Roberts & Co., Ltd. Cover	Steiner, E., & Co. .... 1
Bath and West of England	Fink, F., & Co. .... 24	McAdam & Tuckniss Col. Supp.	Stevenson & Howell, Ltd. .... 22
College ..... 12	Fletcher, Fletcher & Co.,	McKesson & Robbins ..... 16	Strong, Christy ..... 23
Becham, T. ....viii	Ltd. .... Text 252	Merten, F., & Co. .... Col. Supp.	Sturge, J. & E., Ltd. ....v
Berdoe & Fish .... Col. Supp.	Gatheral, G. ....vii	Millar, A., & Co., Ltd. .... 25	Templar Malins, Ltd. .... 25
Bidwell, Bidwell & Co., Ltd. ... 19	Gotar Co. ....vii	Mills, H. .... 13	Thornley, Saml., Ltd. .... 30
Byton, Astley & Co. ....xii	Greenwich Lemonado Co. .... 26	Millner's Chem. Co. ....x	Tidman & Son, Ltd. .... 20
Behringer, C. F., & Soehne ....ii	Griffin, J. J., & Sons, Ltd. .... 16	Mitchell, N. W., & Sons, Ltd. 20	Tilling, T., Ltd. .... 21
Bramwell, E., & Son, Ltd. .... 24	Graeff, S. E. .... Col. Supp.	Morson, T., & Son .....iii	Tomlinson, T., & Son Col. Supp.
Brett & Co. .... Col. Supp.	Halder, E. C. .... 24	Mumford, G. S., & Sons Text 252	Tompkins, J., Ltd. .... 24
Bristol-Myers Co. .... 13	Hannah, T. ....vii	Natural Food Co., Ltd. .... 27	Toogood, W., Ltd. .... 18
British Drug Houses, Ltd. 2, Cover	Hardy Patent Pick Co., Ltd. 21	Newball & Mason ..... 29	Tooth's Extract of Meat Co. 26
Brooks, Peel & Co. .... 22	Harrison, G. W. .... Text 252	Newbery, F., & Sons, Ltd. .... 30	Tunbridge & Wright ..... 23
Brown & Son ..... 21	Hayden Coffin T. P. .... 14	Orridge & Co. .... Col. Supp.	Universal Bottle Co. .... 12
Brytelle Manfg. Co. ....x	Henry, T. & W. ....vi	Pascall, J., Ltd. .... 29	University of Birmingham .... 22
Buehler, H. ....ii	Hewlett, C. J., & Son, Ltd. ....iv	Perkin, Son & Co., Ltd. .... 13	Van Horn & Sawtell ..... 24
Burge, Warren & Ridgley,	Horlick's Malted Milk Co. .... 27	Perkin & Co., Ltd. .... 22	Vichy Water ..... 28
Ltd. ....xi	Ichthyol Co. ....vi	Poths, H., & Co. ....vi	Viscose Development Co., Ltd. 22
Burkett, Sharp & Co. .... 24	International Chemical Co.,	Rance, Miss E. .... 13	Waide, T., & Sons ..... 15
Burrough, J., Ltd. .... Text 252	Ltd. .... 10	Raphael's, Ltd. .... 12	Wardale, F. C., & Co. .... 23
Burroughs Wellcome & Co. ... 31	Isaacs, I., & Co. ....x	Raworth, J. E. .... 24	Washington Chemical Co., Ltd. v
Balvert, F. C., & Co. .... 18	Jewsbury & Brown .... Text 252	Rendell, W. J. .... 25	Wattenbach, O. .... 24
Chemical Works, Victoria ..... 26	Johnson, J. H. & S. ....iv	Robinson & Sons, Ltd. ....v	Webster, T., & Co. .... 24
Christy, T., & Co. .... i, 25	Josephs, P., & Sons, Ltd.	Robinson, B., & Co., Ltd. ....v	West, T., & Son ..... 27
College of Preceptors ..... 13	Col. Supp.	Rudduck & Co. .... Col. Supp.	Whiffen & Sons, Ltd. ....vi
Consolidated Pneumatic Tool	Kay Bros., Ltd. .... 23	Sanitas Co., Ltd. .... Text 252	Whitaker & Co. .... 14
Co., Ltd. .... 21	Keene & Ashwell, Ltd. ....i	Schacht, Warner & Co. Text 252	Yanatas, Ltd. .... 27
Cook, E., & Co., Ltd. .... 3	Kent, G. B., & Sons, Ltd. .... 19	Schliemann's Oil & Ceresine	Zimmermann, A. & M. .... 17
Cook, Geo. .... Col. Supp.	Kingsley & Thackeray Hotels 18	Co., Ltd. .... 30	
Cox, Arthur H., & Co., Ltd. ... 4	Kopp & Joseph ..... 29		

THE BUYERS' GUIDE.

In this section, under appropriate headings, are given the names of firms advertising in this or other issues of the month. No charge is made to advertisers for the insertion of their names, but only those who have contracts current for advertising in this journal are mentioned. The headings refer generally to the classes of goods actually advertised, but this is not a detailed Guide such as appears in "The Chemist and Druggist Diary." Inquiries addressed to the "Information Department," THE CHEMIST AND DRUGGIST, 42 Cannon Street, London, E.C., regarding articles not appearing in these pages receive prompt attention, as shown weekly in the editorial pages.

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Maw, S., Son & Sons

May, Roberts & Co., Ltd.  
Newbery, F., & Sons, Ltd.  
Pothe, H., & Co.  
Qnelch, H. O., & Co.  
Sangers  
Sohnstze, F., & Co., Ltd.  
Solport Bros.  
Sonhall Bros. & Barclay, Ltd.  
Swales, Thomas  
Toogood, W., Ltd.  
Wattenbach, O.  
Woolley, J., Sons & Co., Ltd.  
Zinser, Alberto

**DRUGS, CRUDE**

Burkett, Sharp & Co.  
Gathergood's Exor.  
Goodall, Backhouse & Co.  
Potter & Clarke, Ltd.  
Raines & Co.  
Schmitt & Wildenhayn  
Zinser, Alberto

**EARTHENWARE JARS, &c.**

Fulham Pottery and Owarens  
Filter Co., Ltd.

**EAU DE COLOGNE**

Bronnley, H., & Co. Ltd.  
Farina, J. M.  
Farina, J. M. (No. 4)  
Flokus, Courtenay & Co.  
McCracken, J., & R.  
Sohutze, F., & Co., Ltd.

**EDUCATIONAL INSTITS.**

Bath & West of England College  
Birmingham & Midland College  
Birmingham University  
College of Preceptors  
Elit's College  
Glasgow School of Pharmacy  
Liverpool School of Pharmacy  
London College of Pharmacy  
North of England School  
Northern College of Pharmacy  
Rance, Miss E.  
South of England College  
Westminster College

**EFFERVESCENT PREPS.**

Allen & Hanburys, Ltd.  
Ayrton, Saunders & Co., Ltd.  
Bishop, Alfred, Ltd.  
Blyton, Astley & Co.  
Bristol Myers Co.  
British Drug Houses, Ltd., The  
Onpal, Ltd.  
Evans Sons Lescher & Webb, Ltd.  
Guest, Thos., & Co.  
Kerfoot, Thos., & Co.  
Lorimer-Marshall, Ltd.  
Shirley Bros., Ltd.  
Wright, Layman & Umney, Ltd.  
Wyleys, Ltd.

**ELASTIC HOSIERY**

Ayrton, Saunders & Co., Ltd.  
Burge, Warren & Ridgley, Ltd.  
Haywood, J. H., Ltd.  
Maw, S., Son & Sons  
Wood, Vincent

**ELECTRICAL NOVELTIES**

Evans Sons Lescher & Webb, Ltd.  
Simplex Conduits, Ltd.  
Tokalon, Ltd.  
Ward & Goldstone  
Wright, Archd. J., Ltd.

**EMERY AND CLOTH**

Oakey, J., & Sons, Ltd.

**EMETINE SALTS**

Carnegie Bros.  
Macfarlan, J. F., & Co.  
Whiffen & Sons, Ltd.

**EMULSIFIERS**

Bennett, Sons & Shears, Ltd.  
Boothroyd, H. T., Ltd.  
Wilkinson, S. W., & Co.

**EMULSIONS, C.L.O., &c.**

Ayrton, Saunders & Co., Ltd.  
Baiss Bros. & Stevenson, Ltd.  
Blackie, Robert  
Faulding, F. H., & Co.  
Parke, Davis & Co.  
Scott & Bowne, Ltd.  
Stevenson, H. E., & Co.  
Wyleys, Ltd.

**ENAMELLED HOSPITAL REQUISITES**

Orme, Evans & Co., Ltd.

**ENDOLYTIC TUBES**

Fletcher, Fletcher & Co., Ltd.

**END RUNNER MILLS**

Hardy Patent Piek Co., Ltd.

**ENEMAS**

Burge, Warren & Ridgley, Ltd.  
Ingram, J. G., & Son  
Warne, W., & Co., Ltd.



**EPSOM SALTS**

Howards & Sons, Ltd.  
May & Baker, Ltd.

**ESSENCES, SOL. AND FRUIT**

Alliance Drug & Chem. Co.  
Barnett & Foster  
Boake Roberts, A., & Co., Ltd.  
Bush, W. J., & Co., Ltd.  
Hay Wm., Ltd.  
London Essence Co.  
Minalco Co.  
Stevenson & Howell, Ltd.

**ETHERS**

Baies Bros. & Stevenson, Ltd.  
Duncan, Flockhart & Co.  
Howards & Sons, Ltd.  
Macfarlan, J. F., & Co.  
May & Baker, Ltd.  
Tyrer, T., & Co., Ltd.  
White, A., & Sons

**EUCALYPTUS OIL**

Allan, A. E.  
British Drug Houses, Ltd., The  
Stevenson, H. E., & Co.  
Tasmanian Eucalyptus Oil Co.

**EVAPORATORS**

Fornshaw, E., & Son, Ltd.

**EXTRACT OF HERBS**

Newball & Mason  
Potter & Clarke, Ltd.

**EXTRACTS (MEDICINAL)**

Allan, Stafford, & Sons, Ltd.  
Burroughs Wellcome & Co.  
Curling, Geo., Wyman & Co.  
Evans Sons Lescher & Webb, Ltd.  
Gathergood's, Dr. B. W., Exor.  
Howlett, O. J., & Son, Ltd.  
Parke, Davis & Co.  
Ransom, W., & Son, Ltd.

**FACTORY, &c., SITES**

Great Western Railway

**FEEDING BOTTLES**

Bush, H. W., & Co., Ltd.  
Schutze, F., & Co., Ltd.

**FILLING MACHINES**

Forgrove Machinery Co., Ltd.  
Roberts' Pat. Filling Mach. Co.

**FLY CATCHERS**

Alabastine Co. (British), Ltd.  
Barracough, J., & Co.  
Christy Strong  
Ford, Shapland & Co.  
Kay Bros., Ltd.  
Pettitt, G.  
Smith, Jno. H., & Co.  
Tanbridge & Wright

**FOODS, INVALID, &c.**

Allen & Hanburys, Ltd.  
Bell (John), Hills & Lucas, Ltd.  
Benger's Food, Ltd.  
Brand & Co., Ltd.  
British Casein Co. (1911), Ltd.  
Fairchild Bros. & Foster  
Fletcher, Fletcher & Co., Ltd.  
Frame Food Co.  
Harker, Stag & Morgan, Ltd.  
Horlick's Malted Milk Co.  
Lofthouse & Saltmer, Ltd.  
Natural Food Co., Ltd.  
Nimol, Ltd.  
Plasmon, Ltd.  
Sister Laura's Infant Food Co.  
Southall Bros. & Barclay, Ltd.  
Wander, A., Ltd.  
Willows, Francis B. & T., Ltd.  
Woolley, Jas., Sons & Co., Ltd.

**FOOT APPLIANCES**

Boholl Mfg. Co., Ltd.

**FULLER'S EARTH**

Mumford, G. S., & Sons

**FUMIGATORS**

Sanitas Co., Ltd.

**GLYCERIN**

Price's Patent Candle Co., Ltd.

**GLYCEROPHOSPHATES**

Anglo-American Pharm. Co.  
Merek, E.

**GREASE REMOVER**

Perkin & Co., Ltd.

**GRINDERS, DRUG, &c.**

Allen, Stafford, & Sons, Ltd.  
Goodall, Backhouse & Co.  
Willows, Francis B. & T., Ltd.

**GRINDING MACHINERY**

Hardy Pat. Pick Co., Ltd.

**GRIPE WATER**

Woodward, W., Ltd.

**GUMS**

Fink, F., & Co.  
Kidston, W. M., & Co.

**HAIR DYES**

Harker, C. R., Stag & Morgan.  
Knox, Walker, J., & Co., Ltd.

**HAIR PREPARATIONS**

Alexandre, L.  
Blackie, Robert  
Edwards' "Harlene" Co.  
Harrison, G. W.  
Knoll & Co., Ltd.  
Lindner, M.  
Osborne, Garrett & Co.  
Robare's Aureoline  
Sangers

**HAND CARTS, TRUCKS, &c.**

Crewe & Co.

**HAT CLEANERS**

Christy, Thos., & Co.  
Milner's Chemical Co.  
Senior, Alfred, & Co.

**HAT DYES**

Whitaker & Co.

**HERBS**

Potter & Clarke, Ltd.

**HOMOEOPATHIC MEDICINES**

Ashton & Parsons, Ltd.  
Keene & Ashwell, Ltd.  
Leath & Ross

**HORSE REMEDIES**

Harvey & Co. (Dublin), Ltd.

**HOT-AIR DOUCHES**

Ward & Goldstone

**HOTELS**

Kingsley Hotel  
Thackeray Hotel

**HOT-WATER BOTTLES**

Berliner, Arthur  
Burge, Warren & Ridgley, Ltd.  
Fulham Pottery & Cheavin  
Filter Co., Ltd.  
Galen Manfg. Co., Ltd.  
Schutze, F., & Co., Ltd.  
Toogood, William, Ltd.  
Wood, Vincent

**HYDROGEN PEROXIDE**

May & Baker, Ltd.  
Sanitas Co., Ltd.  
Tyrer, T., & Co., Ltd.

**HYPNOTICS**

Knoll & Co., Ltd.  
Widenmann, Broicher & Co., Ltd.

**HYPHOSPHITES**

May & Baker, Ltd.  
Morson, T., & Son  
Tyrer, T., & Co., Ltd.

**ICHTHYOL**

Ichthyol Gesellschafft

**INK, DICHROIC**

Bewley & Draper, Ltd.

**INK POWDER**

Webster, T. & Co.

**INSECT-BITE PREVENTIVES**

Gibbs, D. & W., Ltd.  
Santag Co.

**INSECTICIDES**

Christy, T., & Co.  
Cook, E., & Co., Ltd.

**INSECT POWDER**

Danys Virus, Ltd.  
Keating, Thomas  
Potter & Clarke, Ltd.  
Raines & Co.

**INSURANCE**

London & Midland Insurance  
Co., Ltd.

**IODIDES**

Morson, T., & Son

**JUNKET PREPARATIONS**

Cox, Arthur H., & Co., Ltd.

**LANOLINE**

Burroughs Wellcome & Co.

**LARD**

Ewen, J., & Sons

**LAVENDER OIL**

Jakson, John, & Co.  
Ransom, W., & Son, Ltd.

**LAVENDER WATER**

Bush, W. J., & Co., Ltd.  
Vinolia Co., Ltd.

**LECITHIN**

Chem. Works "Victoria"  
Merek, E.

**LEMONADE POWDER**

Greenwich Lemonade Co.

**LIME JUICE AND CORDIAL**

Evans Sons Lescher & Webb, Ltd.  
Goodall, Backhouse & Co.  
Idris & Co., Ltd.

**LINSEED, CRUSHED, &c.**

Mumford, G. S., & Sons

**LINTS**

Liverpool Lint Co.  
Maw, S., Son & Sons  
Robinson & Sons, Ltd.  
Vernon & Co., Ltd.

**LIQUORICE JUICE**

Apolo  
Burgoyne, Burbidges & Co.  
Drogueries & Huilleries Anver-  
soises, Ltd.  
Evans Sons Lescher & Webb, Ltd.  
Jackson, Ernest, & Co.  
Mumford, G. S., & Sons  
Soleazzi

**LITHIA SALTS**

British Drug Houses, Ltd., The  
Howards & Sons, Ltd.  
Macfarlan, J. F., & Co.  
May & Baker, Ltd.

**LOOFAHS**

Hall Forster & Co., Ltd.  
Internl. Sponge Importers, Ltd.  
Solport Bros.  
Swales, Thomas

**LOZENGES**

Bylton, Astley & Co.  
Cartwright, W. B., Ltd.  
Denoual, Jules, & Co.  
Guest, Thos., & Co.  
Jackson, Ernest, & Co.  
Potter & Clarke, Ltd.  
Raines & Co.  
Warrick Bros., Ltd.

**MACHINERY, PHARMACAL**

Allen & Hanburys, Ltd.  
Bennett, Sons & Shears, Ltd.  
Forgrove Machinery Co., Ltd.  
Fornshaw, E., & Son, Ltd.  
Gardner, Wm., & Sons, Ltd.  
Griffin, John J., & Sons, Ltd.  
Hardy Patent Pick Co., Ltd.  
Pinder, J. W., & Co.  
Stokes, F. J., Machine Co.  
Thompson & Capper, Ltd.  
Wilkinson, S. W., & Co.

**MAGNESIA AND PREPS.**

Allen & Hanburys, Ltd.  
Ayrton, Saunders & Co., Ltd.  
Cox, Arthur H., & Co., Ltd.  
Henry, T. & W.  
Howards & Sons, Ltd.  
Phillips, Chas. H., Chem. Co.  
Washington Chemical Co., Ltd.  
Wigglesworth & Co.

**MALT EXTRACT & PREPS.**

Allen & Hanburys, Ltd.  
Blackie, Ltd.  
Boulton Macro, Ltd.  
British Drug Houses, Ltd., The  
Burroughs Wellcome & Co.  
Culder, James, & Co., Ltd.  
Corbyn, Stacey & Co., Ltd.  
Curling, Geo., Wyman & Co.  
Davies, Sons & Co.  
Evans Sons Lescher & Webb, Ltd.  
Fletcher, Fletcher & Co., Ltd.  
Paine & Co., Ltd.  
Pascall, James, Ltd.  
Seacharin Corporation, Ltd.

**MARKING INK**

John Bond ("Crystal Palace")

**MEASURES, GRADUATED**

Bush, H. W., & Co., Ltd.

**MEAT EXTRACTS**

Armour & Co., Ltd.  
Brand & Co., Ltd.  
Tooth's Extract of Meat Co.

**MEDICAL COILS**

Ward & Goldstone

**MENTHOL**

Carnegie Bros.

**MERCURIALS**

Alliance Drug and Chem. Co.  
Howards & Sons, Ltd.  
May & Baker, Ltd.  
Tyrer, T., & Co., Ltd.  
Whiffen & Sons, Ltd.

**METAL CLIPS**

Griffin, John J., & Sons, Ltd.

**METHYLATED SPIRIT**

Burrough, J., Ltd.  
Prestone's Liverpool Distillery  
Co., Ltd.

**Randall & Son, Ltd.**

Riddell & Smith

**Thornley, Samuel, Ltd.**

**MILK, CONCENTRATED**

Nestlé's

**MILK SUGAR**

Hollandische Melksuikerfabriek

**MINERAL WATERS, SALTS**

Apollinaris Co., Ltd.

Ingram & Royle, Ltd.

Vichy-Celestins

**MIXERS AND SIFTERS**

Gardner, Wm., & Sons (Gloucester), Ltd.

**MOTOR CARRIERS, VANS, &c.**

Bentink Motor Supply Co.  
Consolidated Pneumatic Tool  
Co., Ltd.  
Tilling, Thomas, Ltd.

**MUSTARD PLASTER**

Bylton, Astley & Co.  
Rueff, Julius

**MUSTARD SEED OIL**

Johnson, J. H. & S.

**NAIL POLISH PAPER, &c.**

Pharm. Ind. Ges. Offenbach

**NAPHTHALENE**

Burt, Boulton & Haywood, Ltd.

**NIGHT LIGHTS**

Price's Patent Candle Co., Ltd.

**OILS, ESSENTIAL**

Allen, Stafford, & Sons, Ltd.  
Alliance Drug & Chemical Co.  
Boake Roberts, A., & Co., Ltd.  
Bonaventura, F., & Co.  
Bush, W. J., & Co., Ltd.  
Dodge & Olcott Co.  
Evans Sons Lescher & Webb, Ltd.  
Jackson, John, & Co.  
London Essence Co.  
Lueders, George, & Co.  
Poppelreuter, W.  
Ransom, W., & Son, Ltd.  
Sohmmel & Co.  
Stevenson & Howell, Ltd.  
Wright, Layman & Umney, Ltd.

**OILS, MINERALS, FATTY, &c**

Allen, Stafford, & Sons, Ltd.  
Price's Patent Candle Co., Ltd.

**OINTMENTS**

Blackie, Robert  
Burgess, E.  
Oldfield, Pattinson & Co.

**OPTICAL GOODS**

Darton, F., & Co.  
Raphael's, Ltd.  
Standard Optical Co.

**OPTICAL TUITION**

British Optical Institute, Ltd.  
College of Optics  
Spectacle Makers Company

**ORANGE & QUININE WINE**

Idris & Co., Ltd.  
Miller, A., & Co., Ltd.  
Robinson, B., & Co., Ltd.

**ORGANIC SOLVENTS**

Hopkin & Williams, Ltd.

**ORGANO-THERAPEUTIC**

PREPS.  
Duncan, Flockhart & Co.

**OTTO OF ROSE (SYNTH.)**

Bush, W. J., & Co., Ltd.  
Givaudan, L.  
Kerfoot, Thos., & Co.  
Stevenson & Howell, Ltd.  
Warrick Bros., Ltd.  
Wright, Layman & Umney, Ltd.

**OTTO ROSE (FRENCH)**

Gattefossé et fils

**OVERALLS**

Gardiner & Co., Ltd.  
Lilywhite, Ltd.

**PACKED GOODS**

Allen & Hanburys, Ltd.  
Baies Bros. & Stevenson, Ltd.  
Blackie, Robert  
British Drug Houses, Ltd., The  
Cartwright, W. B., Ltd.  
Corbyn, Stacey & Co., Ltd.  
Cox, Arthur H., & Co., Ltd.  
Christy, Thos., & Co.  
Cupal, Ltd.  
Curling, Geo., Wyman & Co.  
Davies, Sons & Co.  
Evans Sons Lescher & Webb, Ltd.  
Goodall, Backhouse & Co.  
Harker, C. R., Stag & Morgan.  
Lofthouse & Saltmer, Ltd.  
Lorimer-Marshall, Ltd.  
May, Roberts & Co., Ltd.  
Oldfield, Pattinson & Co.  
Potter & Clarke, Ltd.  
Sangers  
Shirley Bros., Ltd.  
Southall Bros & Barclay, Ltd.  
Standard Tablet & Pill Co., Ltd.  
Toogood, W., Ltd.

**PALATINOLIDS**

Oppenheimer, Son & Co., Ltd.



**PAPER HANDKERCHIEFS**

Powell, J. T., &amp; Co.

**PARAFFINUM LIQUIDUM**Burgoyne, Burbridges & Co.  
Price's Patent Candle Co., Ltd.  
Sohliemann's Oil & Ceresine Co.**PASTILLES**Allen & Hanburys, Ltd.  
Aeche, O. F., & Co.  
Blyton, Astley & Co.  
Burroughs Wellcome & Co.  
Evans Sons Lescher & Webb, Ltd.  
Guest, Thos., & Co.  
Kerfoot, Thomas, & Co.  
Warrick Bros., Ltd.**PATENT AGENTS**Barker, R. W.  
Raworth, John E.**PELLETS**

Blyton, Astley &amp; Co.

**PEPPERMINT OILS**Bush, W. J., & Co., Ltd.  
Dodge & Olcott Co.  
Jaksen, John, & Co.  
Ransom, W., & Son, Ltd.**PERFUME MATERIALS**Boehringer, C. F., & Soehne  
Bonaventura, F., & Co.  
Bush, W. J., & Co., Ltd.  
Givaudan, L.  
Kerfoot, T., & Co.  
Lueders, George, & Co.  
Naef, M., & Co., Succrs.  
Schimmel & Co.  
Wright, Layman & Umney, Ltd.**PERFUMES**Allen & Hanburys, Ltd.  
Baiss Bros. & Stevenson, Ltd.  
British Drug Houses, Ltd., The  
Bronnley, H., & Co., Ltd.  
Bush, W. J., & Co., Ltd.  
Christy, T., & Co.  
Erasmio Co., Ltd.  
Evans Sons Lescher & Webb, Ltd.  
Fickus, Conrtenay & Co.  
Lescol Perfumery Co.  
McCracken, J. & R.  
Pazery, Richard  
Potter & Clarke, Ltd.  
Price's Co., Ltd.  
Priehard & Constance, Ltd.  
Quelch, H. C., & Co.  
Shirley Bros., Ltd.  
Southall Bros. & Barclay, Ltd.  
Vinolia Co., Ltd.  
Warrick Bros., Ltd.  
West, T., & Son**PERLES**

Tye, John, &amp; Son

**PESSARIES (SOLUBLE)**Burge, Warren & Ridgley, Ltd.  
Rendell, W. J.**PETROLEUM JELLY**Cheesebrough Manfg. Co.  
Kidston, W. M., & Co.**PHENOLPHTHALEIN**

Merck, E.

**PHOSPHORUS AND PREP.**

May &amp; Baker, Ltd.

**PHOTO. CHEMICALS**Boehringer, C. F., & Soehne  
Johnson & Sons (Mfg. Chems.), Ltd.**PHOTO. GOODS**Ayrton, Saunders & Co., Ltd.  
Barclay & Sons, Ltd.  
Burroughs Wellcome & Co.  
Butcher, W., & Sons, Ltd.  
Evans Sons Lescher & Webb, Ltd.  
Express Developing Co.  
Kent, G. B., & Sons, Ltd.  
Lennon, Ltd.  
May, Roberts & Co., Ltd.  
Newbery, F., & Sons, Ltd.  
Rajar, Ltd.  
Sangers**PHOTO. POSTCARDS, &c.**

Rajar, Ltd.

**PILL MAKERS**Blyton, Astley & Co.  
Cox, A. H., & Co., Ltd.  
Davies, Sons & Co.  
Howard Lloyd & Co., Ltd.  
McKesson & Robbins  
Standard Tablet & Pill Co., Ltd.  
Wand Manufacturing Co.**PLASTERS**Allcock Manfg. Co.  
Beiersdorf, P., & Co.  
Berliner, Arthur  
Blyton, Astley & Co.  
Dalmas, A. de St., & Co.  
Galen Manfg. Co., Ltd.**PLEATED PAPER**Darter, Wilkinson & Co.  
Smith Bros. & Co., Ltd.**POCKET LAMPS, ELECTRIC**

Ward &amp; Goldstone

**POLISHES (VARIOUS)**Bradley & Bourdas  
Oakley, J., & Sons, Ltd.**POSTAL BOXES**

Robinson &amp; Sons, Ltd.

**POWDER PAPER**Kopp & Joseph  
Pharm. Ind. Ges. Offenbach  
Priehard & Constance, Ltd.**PRINTERS**Ford, Shapland & Co.  
Suttley & Silverlock, Ltd.  
Townsend, J., & Sons  
Waide, T., & Sons  
Wilkinson, James F.**PROPRIETARY ARTICLES**Anglo-Amer. Pharm. Co., Ltd.  
Ashton & Parsons, Ltd.  
Barclay & Sons, Ltd.  
Bayer Co., Ltd.  
Beecham, T.  
Bell (John), Hills & Lucas, Ltd.  
Bow's Liniment, Ltd.  
Bresillon, M., & Co.  
Browning, W., & Co.  
Burgess, E.  
Chemische Fabrik von Heyden  
Christy, T., & Co.  
Coleman & Co., Ltd.  
Corbyn, Stacey & Co., Ltd.  
Crimson Cross Dispensary  
Cupal, Ltd.  
Daisy, Ltd.  
Davenport, J. T., Ltd.  
De Roos, Johnson & Co.  
Duncan, Flockhart & Co.  
Edwards, W., & Son  
Evans Sons Lescher & Webb, Ltd.  
Expurgo Manfg. Co.  
Fellows' Med. Manfg. Co.  
Fennings, Alfred  
Ferris & Co., Ltd.  
Fulford, C. E., Ltd.  
Goodall, Backhouse & Co.  
Gotar, Ltd.  
Harrison, Geo. W.  
Henry, T. & W.  
Hommel's (Dr.) Haematogan  
Ichthyol Gesellschaft  
International Laboratories  
Kay Bros., Ltd.  
Kutnow, S., & Co., Ltd.  
Kyho Proprietary, Ltd.  
London Proprietary Co.  
Martindale, W.  
May, Roberts & Co., Ltd.  
Midland Drug Co.  
Mumford, G. S., & Sons  
Newbery, F., & Sons, Ltd.  
Odol Chemical Works  
Oppenheimer, Son & Co., Ltd.  
Owbridge, W. T., Ltd.  
Phillips, Chas. H., Chem. Co.  
Pneumosan Chemische-Fabrik  
Primer, J.  
Resinol Chemical Co.  
Saccharin Corporation, Ltd.  
Sanalac, Ltd.  
Sangers  
Sargol Co.  
Schimmel & Co.  
Scott & Bowne, Ltd.  
Squire & Sons, Ltd.  
Standard Tablet & Pill Co., Ltd.  
Stedman, J. H.  
Thompson & Capper, Ltd.  
Transatlantic Ex. and Imp. Co.  
Tunbridge & Wright  
Warrick Bros., Ltd.  
White, A. J., Ltd.  
Wilcox, Jozeau & Co.  
Woodward, W., Ltd.  
Wright, Layman & Umney, Ltd.  
Yanatas, Ltd.**PUFFS**

Solport Bros.

**QUININE AND SALTS**Alliance Drug & Chem. Co.  
Boehringer, O. F., & Soehne  
Buchler & Co.  
Carnegie Bros.  
Corbyn, Stacey & Co., Ltd.  
Howards & Sons, Ltd.**RADIUM AND SALTS**Buchler & Co.  
Hopkin & Williams, Ltd.**RAZORS**Hovenden, R., & Sons, Ltd.  
Maw, S., Son & Sons  
Wright, Archd. J., Ltd.**RENNET ESSENCE,****POWDER, &c.**

Lorimer-Marshall, Ltd.

**RESINS AND RESINOIDS**Allen, S., & Sons, Ltd.  
Macfarlan, J. F., & Co.  
Morson, T., & Son  
Ransom, W., & Son, Ltd.  
Smith, T. & H., Ltd.**RESPIRATORS**

Zimmer &amp; Co.

**RUBBER GOODS**Berliner, Arthur  
Burge, Warren & Ridgley, Ltd.  
Haywood, J. H., Ltd.  
Ingram, J. G., & Son  
Maw, S., Son & Sons  
Tompkins, J., Ltd.  
Warne, W., & Co., Ltd.**RUBBER STAMPS**

Richford, C. D.

**SACCHARIN**

Saccharin Corporation, Ltd.

**SANTONIN**Merck, E.  
Smith, B. A., & Co.**SAPONIN**

Field, C. W.

**SCIENTIFIC APPARATUS**Perken, Son & Co., Ltd.  
Pillischer, J.  
Reynolds & Branson, Ltd.**SEA SALT**

Tidman &amp; Son, Ltd.

**SEED-DRESSING**Hawker, Arthur E.  
Tomlinson & Hayward, Ltd.**SEEDS**

Potter &amp; Clarke, Ltd.

**SERUMS AND ANTITOXINS**Allen & Hanburys, Ltd.  
Burroughs Wellcome & Co.  
Evans Sons Lescher & Webb, Ltd.  
Parke, Davis & Co.  
Schimmel & Co.  
Wilcox, Jozeau & Co.**SHAMPOO POWDERS**

Standard Tablet &amp; Pill Co., Ltd.

**SHARES**

MoAdam &amp; Tuckniss

**SHEEP DIPS**Lart, Boulton & Haywood, Ltd.  
Tomlinson & Hayward, Ltd.**SHOP FITTINGS**Ayrton-Graham, Ltd.  
Cook, George  
Evans Sons Lescher & Webb, Ltd.  
Edmonds, A. & Co., Ltd.  
Farley & Co.  
Grant, D.  
Harris & Sheldon, Ltd.  
Josephs, Philip, & Sons, Ltd.  
Maw, S., Son & Sons  
Mills, H.  
Parnall & Sons  
Radduck & Co.  
Sangers  
Southall Bros. & Barolay, Ltd.**SHOULDER STRAPS**

Wood, Vincent

**SIGNS, ELECTRIC, &c.**

Universal Sign Works

**SILVERWARE TOILET GOODS**

Scott, Adolph

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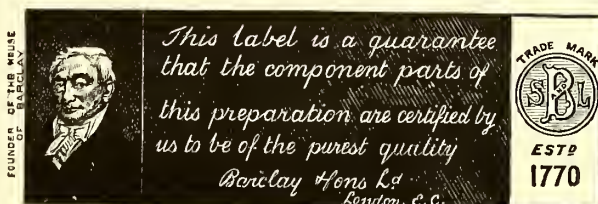
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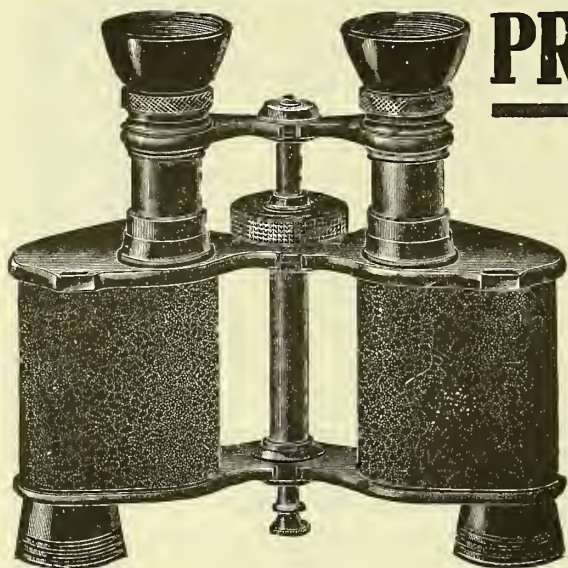
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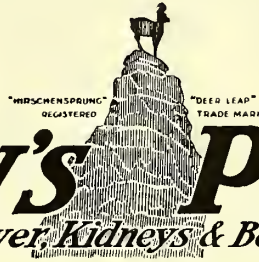
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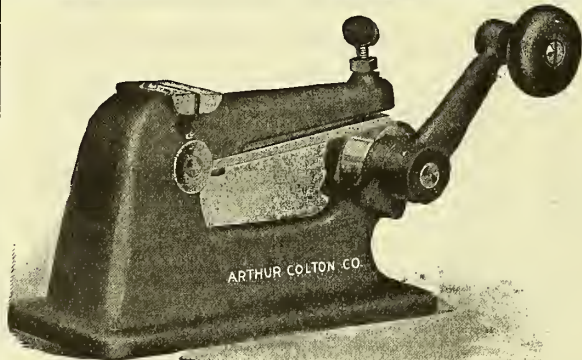
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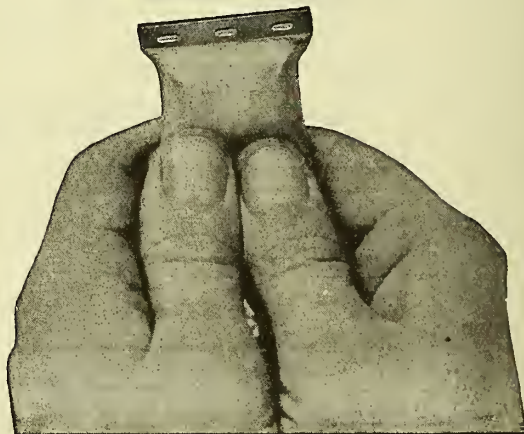
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No. 2429.

Square Bottles, fitted Boxwood-top Corks, Artistic Labels, finished either Brown or Green Ribbon.

Assorted Odours—

Lavender, Cologne, Violet, Verbena, Oriental, Rose or Pine.

9	18	36 ounces,
10/6	18/-	34/- dozen.

SHOWCARDS SUPPLIED.



2430.

No. 2430.

Round Bottles, fitted Boxwood-top Corks, Artistic Labels, finished either Brown or Green Ribbon.

Assorted Odours—

Lavender, Cologne, Violet, Verbena, Oriental, Rose or Pine.

8	16	32	40 ounces.
7/6	13/-	26/-	36/- dozen.
60	80	160 ounces.	
48/-	62/-	120/-	dozen.

Customer's name, etc., printed on labels for orders of two dozen assorted of either style.

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## Water Softener.

In Green or Brown Wood Veneer Boxes.

Assorted Odours.

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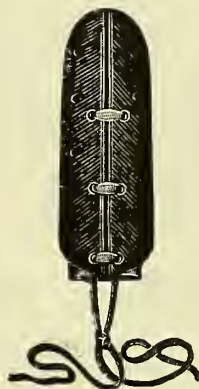
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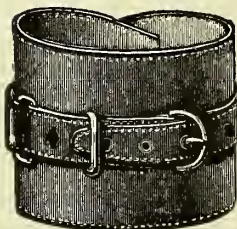
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3/9 PER DOZEN.



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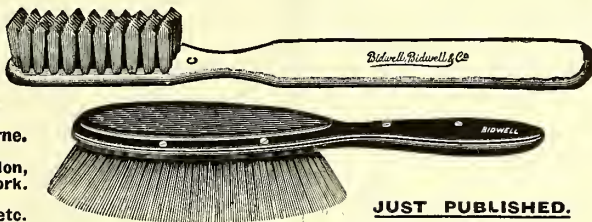
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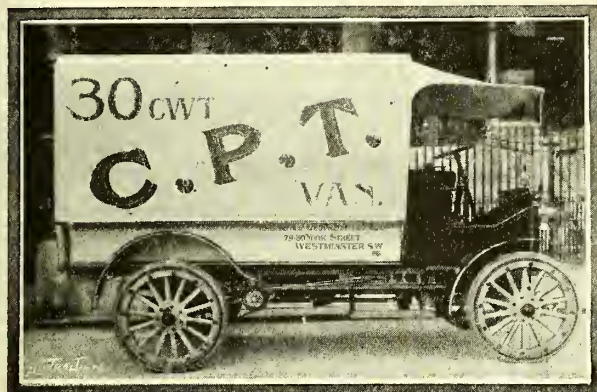
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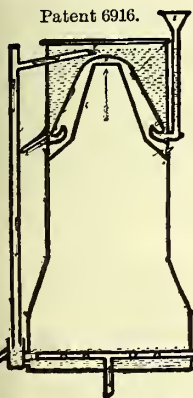
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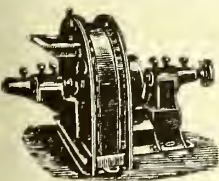
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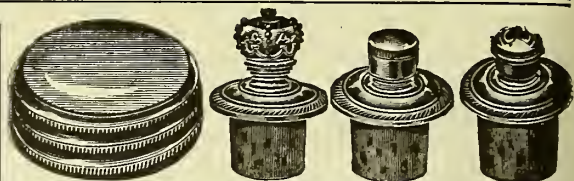
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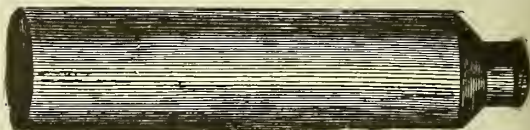
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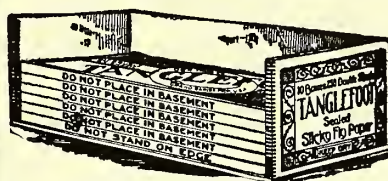


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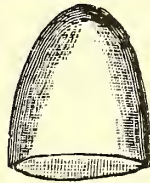
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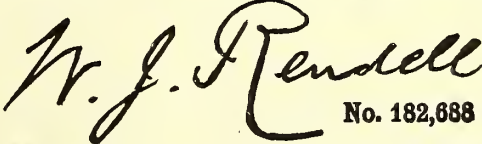
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**DISINFECTANTS**  
OF ALL KINDS  
Cheapest Makers of Co-efficient Acids and Fluids.  
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**CHRISTY'S MONTHLY**  
Many valuable suggestions will be found in the new  
issue of this Journal, published by the enterprising  
House Christy, and it behoves every up-to-date  
Chemist to see that his name is entered on the  
monthly mailing list.

**A. MILLAR & CO., LTD., DUBLIN**  
**PURE ORANGE WINE**  
VINUM AURANTII, B.P.) Prepared in strict accordance with the Formula of the British Pharmacopœia. (Wholesale only)  
London Agent: JAMES STIRTON, 43 GREAT TOWER STREET, E.C.

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**SOLUBLE QUININE PESSARIES.**   
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Trade Mark,   
without which  
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Several injunctions in the High Court of Justice having already been obtained (reports of which have appeared in "THE CHEMIST AND DRUGGIST"), W. J. RENDELL'S SOLICITORS are instructed to take proceedings against all persons (Makers or Vendors) fraudulently using the name of W. J. RENDELL, "RENDELL," or any colourable imitation thereof in connection with Pessaries NOT manufactured by

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# GREENWICH LEMONADE

$2\frac{1}{2}$ d. packets make 2 Gallons ;  $4\frac{1}{2}$ d. packets make 4 Gallons of splendid Lemonade.

Our Advertising Scheme sells 1 to 4 gross in one day when weather is favourable, AND INCREASES YOUR ORDINARY TRADE.

Send us a Postal Order or Cheque for 10/9, and we will send you, Carriage Paid,  $6\frac{1}{2}$  dozen  $2\frac{1}{2}$ d. Packets, Showcards, Window Slips, particulars of above scheme and material to carry it out: or order through your Wholesaler.

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### THE CHEMISTS' BRAND.

## 'The Lancet' says: 'Of Standard Purity'

Recommended also by *The British Medical Journal, Health, The Chemist and Druggist, Food and Sanitation.*

Ask for SHOWCARDS and HANDBILLS. To be obtained of all Wholesale Houses.

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Wholesale and Export Drug Merchants,  
Manufacturing Chemists

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Invite the Trade to take up the following valuable P.A.T.A. Protected Lines, bearing a very large Protected Retail Profit, which sell freely and are well known and valued by the Public in many parts of the country.

	Protected Retail Price.	Dozen Net.
* LOSALL'S SALT (well advertised), tins	6d.	3 6
* " " " " " "	1/-	7/-
* " " " " " " bottles in cartons	1/6	10/6

\* Losall's Salt sells so well, surely it must pay Pharmacists to stock such a big profit-bearing protected line.

### LOSALL'S COMPOUND SULPHUR SOAP.

A valuable emollient medicated skin soap, especially suitable for use in Eczema } 1/- 8/-

Chemists requiring effective advertising matter for Losall's Salt, &c., will, on application direct to Lofthouse & Saltmer, receive a liberal supply of Dummies, Showcards, Window Slips, Price Tickets, &c., Carriage Paid, whether or no they have an account open with the Firm.

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Fluid Beef is the line that sells. More cups to the bottle, better quality and low minimum selling prices are a few points that, backed by good advertising, create the demand.

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One quarter of the selling price is yours. Send to-day for free sample, price list, and special advertising terms to—

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### LECITHIN EX OVO

#### LECITHIN-ALBUMEN POWDER

For the manufacture of Tablets, Chemical Foods, Nerve Tonics, etc.

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Prepared with  $2\frac{1}{2}\%$ , 5%, or 10% of PURE Lecithin in bulk, or in boxes or cartons.

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Prepared by Chemical Works "VICTORIA," Berlin, S.W.

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MALTED BARLEY, WHEAT & MILK in TABLET Form.

In Glass Pocket Flasks.

Costs the Trade 9/- for Single Dozens.

ESPECIALLY CONVENIENT FOR TRAVELLERS  
:: SPORTSMEN, ATHLETES AND CYCLISTS. ::

Write for particulars to—

**HORLICK'S MALTED MILK CO.**  
SLOUGH, BUCKS., England.

**A NEW SIZE  
TO SELL FOR  
ONE SHILLING.**



One Dozen Flasks for Counter Display.

PRICES PROTECTED.

## Dr. Allinson's Food Preparations.

Food for Babies, Prepared Barley, Brunak, Power, N-F. Cocoa, Biscuits, Soup, Nutbutter (Walnut Brand), Wholemeal, &c.

### NOTICE TO THE TRADE.

We issue a list of WHOLESALE HOUSES who keep above in stock; if for any reason you have difficulty in obtaining supplies, please send postcard direct to us, and a list will be sent to you by return. See trade mark on all our goods: "T. R. ALLINSON." *None Genuine Without.*

**NATURAL FOOD COMPANY, LIMITED,**  
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Handbills, Booklets, Showcards, &c., Free.

**N.B.**—Our goods are to be sold only at prices stated upon the Price List we issue to the trade.

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LORD ACTON.  
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Liquid form, put up in 4 and 8 oz. bottles.

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**THOMAS WEST & SON,** 1187 Chester Road, MANCHESTER.  
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(Registered)

the new cure for

**RINGWORM**

**MANGE**

**& all kinds of  
Parasitical  
Diseases.**

(PROTECTED BY P.A.T.A.)

PRICES.

	Retail.	Trade.
Aspad for Human use	1/1 1/2	10 1/2 d.
" " (large)	2/9	2/1
Aspad for Vet. use	2/6	1/9
Aspad " " (1/2 gal.)	6/-	4/6
Aspad " " (1/2 gal.)	10/6	8/6
Aspad " " (1 gal.)	20/-	16/-

Special Quantities. Special Quotations.

**THE KYHO PROPRIETARY, Ltd., 17 Victoria St., London, S.W.**



**THE NATURAL MINERAL WATER**

# VICHY-CÉLESTINS

STATE SPRING.

**DISORDERS OF THE LIVER;  
GOUT;**

**DIABETES; RHEUMATISM; GRAVEL, &c.**

## VICHY-ÉTAT PASTILLES.

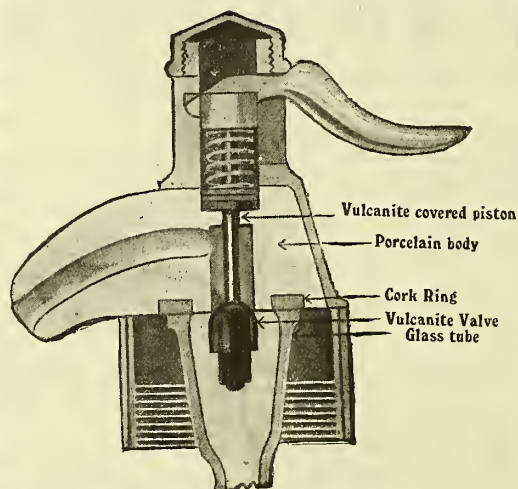
Two or three Pastilles after each meal facilitates digestion.

CAUTION: Each bottle from the STATE SPRINGS bears a neck label with the words "VICHY-ÉTAT" and the name of the SOLE AGENTS:

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And at LIVERPOOL and BRISTOL.



### TESTIMONY OF USERS:

*"The most Perfect Hygienic Syphon on the Market."*

If you contemplate filling your own Syphons apply here for up-to-date Electrical Plant.

**SHARMAN'S PATENT  
SYPHON CO. LTD.**

171 LOWER CLAPTON ROAD, N.E.

Gold Medal awarded, Odessa Exhibition, 1910

## SYPHON SATISFACTION

secured by using  
**Sharman's (patent)  
Hygienic Syphon.**

Chemists are now becoming alert to the disadvantages of the ordinary Syphon. The usual heads are made of Tin, Lead, Antimony or Aluminium Alloys which dissolve in  $\text{CO}_2$ ; therefore the water cannot be pure and its use may be attended with most serious results.

The head of Sharman's Hygienic Syphon is of solid porcelain and the valve and piston are covered with vulcanite.

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# PASCALL'S GOLDEN MALTEX

Contains  
25%  
Pure  
Malt  
Extract



of  
especial  
food value  
for  
Children.

6d. & 1/-  
BOTTLES.

4 OZS. 3d.

† Pascall's Golden Maltex is admirably suited for sale by Chemists, owing to its nutritive and restorative qualities.

† Order through your Wholesale Druggist, or direct from the manufacturers,

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TOILET  
SOAP, 9d.

A high-grade  
Toilet Soap of  
marked Antiseptic  
properties.  
Non-irritating.  
Agreeably perfumed.  
Lathers in hard water.  
Assists the complexion.  
Heals cuts & abrasions.  
Invaluable in the  
Nursery.

SHAVING SOAP, 9d.

A READY SELLER WITH GOOD PROFIT.

Chemists should write for terms.

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Stocked by all Patent Medicine Vendors.

# COMPRESSED POWDER

in best quality, in all sizes  
and colours, perfumed and  
non - perfumed, supplied  
cheaply and well by

KOPP & JOSEPH, *Perfumery  
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Improve Your Sales  
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## BILZ- SINALCO ESSENCE

Sold in Concentrated  
Form or as Syrup.

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Celebrated in every  
Civilised Country.

Licences granted for  
Districts.

Makes  
Nature's own Cooling  
and Refreshing Drink

## "PROSET"

Apply—

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# GOOD!

IT'S MASON'S  
The Drink for the Masses

Millions of glasses used daily  
by workers all over the Empire

Please allow us to Sample and Quote—

Citrate Magnesia

He lth Salt

Salines

Liver Salt

Blood Salt

Sulph. & Sarsap. Salt

Lemonade

Crystals, &c.



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NOTTINGHAM

**BEFORE**PLACING YOUR  
ORDERS FOR

# PETRO. JELLY

WRITE TO

**Schliemann's Oil & Ceresine Co., Ltd.**Tel. No.: 5411 Avenue.  
Tel. Add.—"Mannschlie."

London House, 3 New London St., E.C.

(2)

Petrolatums, B.P., and  
Commercial Qualities,  
White, Cream, Yellow.

## METHYLATED SPIRIT

Buy from one of the Oldest Houses in the Trade.  
Write for Prices. **ESTABLISHED 1794.****SAMUEL THORNLEY, LTD., BIRMINGHAM**

THE "D & O" BRAND  
MEANS  
"STANDARD OF QUALITY"

**ESSENTIAL OILS, SOUTH AMERICAN BALSAMS & DRUGS.**Write for Samples and Prices of our **PEPPERMINT OILS.****DODGE & OLCOTT CO.,** 20 MARK LANE,  
LONDON, E.C.You may  
boil it if  
you wish.

Per doz. 4/6. Usual Discount.



➡ A Brush giving great  
satisfaction  
to user and  
also profit  
to seller.

**FRANCIS NEWBERY & SONS, LIMITED,**

27 &amp; 28 CHARTERHOUSE SQUARE, LONDON, E.C.

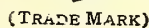




# LANOLINE PRODUCTS

Presenting the genuine original Lanoline. Supreme in quality  
and elegance. Profitable to sell and a pleasure to dispense.

• Lanoline, Veterinary, 1 lb. tins 1/1



Shaving Soap, *in sticks*, 8/6 per dozen

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**The SUCCESS of LAST WINTER  
The BOOM of the Coming WINTER**

**WHY?** Because they excel all others at the price, and give entire satisfaction to the public.

PHARMACISTS, be sure and Stock “LUNGPINES” this coming season. Splendid Showcards, Window Bills, also neatly printed Pockets and Cartons sent free with each order. Price 1/- per lb., subject to profit-sharing discount.

**SEND FOR FREE SAMPLE.**

We are arranging to run along with the above a “Lungpine” Cough Mixture, to retail at 9½d and 1/3.

**CUPAL LTD., BLACKBURN.**

## SHOWCARDS.

We shall be pleased to send, on request, a handsome  
**PEPTOGENIC MILK POWDER SHOWCARD**  
(For Humanising Cows' Milk)

to all Chemists who may wish to exhibit such a card  
in their shop or shop-window. Also a

**‘PANOPEPTON’ SHOWCARD**

to those Chemists who hold a Wine Licence.

**FAIRCHILD BROS. & FOSTER,**  
**64/65 Holborn Viaduct, E.C.**





**Weekly Journal of the Chemical and Drug Trades**  
and of  
**British Pharmacists throughout the Empire.**  
ESTABLISHED 1859.

The CHEMIST AND DRUGGIST is the leading journal addressing the chemical, Drug and allied trades in the British Empire and other countries the Old and New Worlds. It has a larger paid subscription circulation than any other Drug Trade Journal, and is the official organ of nineteen Chemists' Societies in Australia, Ireland, New Zealand, South Africa, and the West Indies.

#### Subscription Rates.

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**Head Office: 42 CANNON STREET, LONDON, E.C.**  
Telegrams: "Chemicus Cannon London." Telephone 852 Bank (two lines).  
**Branches: ADELAIDE, MELBOURNE, AND SYDNEY, AUST.**

#### CONTENTS OF THIS ISSUE.

Vol. LXXXV., No. 6 (Series No. 1802).

"Page" and "p." (in the text) refer to the numbers at the top of the pages; the numbers in the Index refer to the Index folios at the bottom of the pages, which also are used in such references as 1913, II., 876.]

	PAGE		PAGE
A Trip Round Africa .....	53	Insurance Act Dispensing .....	55
"Aquitania" .....	34	Irish News .....	38
Australasian News .....	40	Legal Reports .....	40
Bankruptcy Report .....	41	Marriages .....	41
Births .....	41	Medical Memoranda .....	52
British Medical Association .....	54	New Books .....	57
Business Changes .....	42	Observations and Reflections .....	47
Companies and Company News .....	41	Personalities .....	42
Correspondence .....	62	Pharmaceutical Society of Great Britain .....	43
Cus-Cus Oil .....	51	Poisonings .....	34
Deaths .....	41	Postcard Competition .....	46
Deed of Arrangement .....	41	Prison-made Quinine-tablets .....	59
Editorial Articles:		Retrospect .....	64
War .....	48	Scientific Progress .....	45
Patent-medicine Inquiry .....	49	Scottish News .....	38
Dental Legislation .....	50	South African News .....	39
Notes .....	51	Trade-marks .....	57
English News .....	37	Trade Notes .....	37
European War .....	35	Trade Report .....	60
French News .....	39	Veterinary Notes .....	58
Gazette .....	59	Westminster Wisdom .....	42
India and the East .....	59	Wills .....	42
Information Department .....	46		

#### THE EDUCATIONAL SPECIAL.

An exceptional interest attaches to this year's Educational Number of THE CHEMIST AND DRUGGIST, for, besides the usual complete and comprehensive information, the

#### New British Pharmacopoeia

will be fully dealt with if received. Not only will the Educational Number be eagerly studied, therefore, by all connected with pharmaceutical, medical, and scientific education, but it will be invaluable for reference for commercial purposes. This lends added value to our advertising pages, and the Publisher is booking space now. Send him your instructions at once, for the publication date is

**August 15, 1914.**

## SUMMARY.

Subscribers are advised to read this column first.

#### European War.

In an editorial article beginning on p. 48 we discuss the conditions of the produce markets.

On p. 35 we deal with the situation as between wholesalers and retailers of medicines.

It is imperative that economy should be exercised by all who use or have to deal with medicines, and it should begin with doctors and chemists (p. 49 and p. 35).

We give the official particulars as to the conditions upon which dispensers are being employed for temporary service in the British Army (p. 35).

Our inquiries justify us in saying that wholesale houses generally are dealing with the situation so that the real needs of the sick will be met. See especially the observations on p. 35.

#### Patent-medicine Inquiry.

The Select Committee of the House of Commons completed its work on Tuesday, when Sir Henry Norman's draft report, as revised, was submitted to the House of Commons (p. 42).

We deal editorially with the Committee's recommendations. It is proposed that the Medicine-stamp Acts should be consolidated and amended, so as to limit the exemptions (e.g., entire drugs sold under fancy names and body-name medicines). Further, that a system of registration of proprietary medicines similar to that of Canada should be adopted, and certain conditions imposed in regard to medicated wines and alcoholic medicines, while the advertising of medicines for incurable diseases should be prohibited (p. 49).

#### Special Articles and News.

The illustrated article on the *Aquitania's* dispensaries and hospitals is topical (p. 34).

Insurance dispensing news is of general interest this week, and includes a number of 1913 settlements (p. 55).

Fifty years ago the British Parliament passed the Poisoned Flesh Prohibition and Weights and Measures Bills (p. 64).

Some prisoners in India are employed in making and packing quinine-tablets. See the illustrated article on p. 59.

The British Medical Association has adopted a resolution which is designed to cut down Insurance Drug Tariff prices (p. 54).

Some photographs taken by Mr. John C. Hewlett during a recent trip in and around Africa are reproduced, with notes, on pp. 53-54.

We award four copies of the new edition of "Pharmaceutical Formulas" to competitors in regard to the best B.P.C. papers (p. 46).

Mr. Pura Singh, F.C.S., of the Dehra Dun Research Department, communicates an interesting paper on the supply and constants of vetivert oil (p. 51).

Divisional Court of King's Bench has issued a rule compelling the Registrar of Joint-stock Companies to register a company whose title includes the word "dental" (p. 40).

The Pharmaceutical Council, at its meeting on Wednesday, made arrangements for carrying on business during the recess, and otherwise did a good morning's work, which is reported on pp. 43-45.

The deaths reported include Mr. F. W. Ashton (London), Mr. E. Bing (Canterbury), and Mr. John Nesbit (Portobello). The last-named was at one time closely identified with the Pharmaceutical Society's work (p. 41).

The future of dentistry, so far as legislation is concerned, is discussed in an article on p. 50, where also we deal with the report issued by a Board of Education Committee on the demands of unregistered dentists and the existing need for more registered men.

#### Trade and Market Matters.

Business has been practically suspended since our last owing to the European war and financial conditions. Prices are mostly nominal for the time being (p. 60).

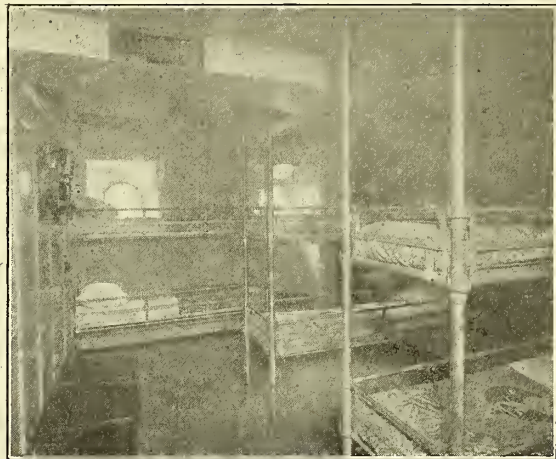
The United States Department of Agriculture has issued a circular to drug-importers declaring standards for fennel, coriander, cardamoms, anise, and celery-seed (p. 61).



## R.M.S. "Aquitania."

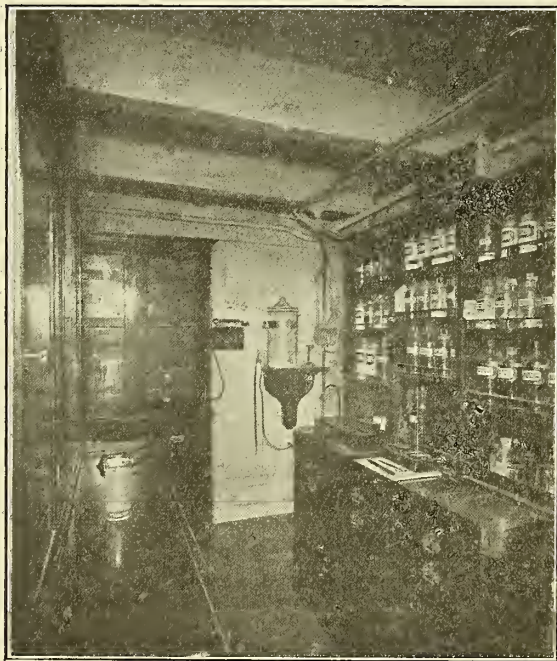
*Pictures of and notes about this Great Ocean Liner's Dispensaries and Hospitals.*

**N**EXT to the Royal Navy no ships afloat are of more interest at the present time than the great ocean liners, and of all of them none is better suited than the *Aquitania* for transport purposes. We are indebted to



A. HOSPITAL WARD.

the Cunard Steamship Co., Ltd., Liverpool, for the photographs which we reproduce. The provision made for illness, etc., on board is excellent. Two surgeons are carried. The senior surgeon's room is on "B" deck with his consulting-room adjoining. These



A DISPENSARY.

rooms are situated at the after-end of "B" deck first-class accommodation, a gangway leading from the promenade outside to second-class quarters. The assistant surgeon is accommodated on "C" deck. There

are altogether three consulting-rooms and dispensaries, one for each class. There are three hospitals on board—one for men, divided into two wards; one for women, divided into three wards; and the infectious hospital, situated aft on "D" deck, and divided into three wards. The men's and women's hospitals and the operating-room (14 ft. 6 in. by 13 ft.) are situated on "E" deck amidships. The dispensaries are well furnished, as the photograph of one of them shows. For such short



OPERATING-THEATRE.

voyages as the ship makes the variety of medicines required is not large, the chief items in this one being:

Spt. chlorof.	Mist. cramp.
Tinct. ferri perchlor.	Mist. tussi
Acid. tart.	Mist. anti-cholera
Sodii sulph.	Mist. sennæ
Pot. tart. acid.	Pil. rhei co.
Spt. camph.	Pil. coloc. co.
Pulv. zinci ox.	Pil. col. co. c. hyos.
Pulv. acacia	Vin. ipecac.
Troch. phenolphthalein.	Tinct. card. co.
Tinct. gent. co.	Spt. ammon. arom.
Acid. nit. hyd. dil.	Caps. copaibæ
Tinct. quin. ammon.	Pot. bicarb.
Liq. hamamel.	

The dispensing is done by the surgeons themselves, cleaning and the like falling to a steward.

## POISONING FATALITIES.

EIGHT deaths due to taking poisons have been reported during the past week, four of them being accidental. Brief particulars are appended:

**Bellite.**—Lawrence Hardman, Blackburn, died from cerebral congestion, probably due to poisoning by inhaling bellite dust in the course of his occupation.

**Carbolic Acid.**—Joseph Ferenbach, White Horse Street, London, E., poisoned himself by drinking carbolic acid in mistake for cherry brandy.

**Hemlock.**—Robert Ashurst, aged five, Dunston, Gateshead, died from narcotic-poisoning caused by eating hemlock-leaves gathered by himself.

**Laudanum.**—Lily Pickles, Rotherham, died through taking this poison with suicidal intent while in a state of temporary insanity.

**Opium.**—Percy L. Brown died at Leicester Royal Infirmary from opium-poisoning.

**Perchloride of Mercury.**—Elsie L. Wilson, Blandford Square, London, W., ended her life by taking about 70 grains of this chemical while mentally deranged.

**Salt of Lemon.**—Mary E. Gledhill, Beverley, committed suicide by taking this poison while of unsound mind.

**Weed-killer.**—Barbara Tuck, aged eighteen months, Wells, died as a result of drinking a weed-killer to which she accidentally gained access.



## European War.

*Motto for the British Drug-trade:* Keep cool, be economical with everything you buy and sell, and help the country by not yielding to the temptation of profiting yourself in the time of the Nation's trial.

**F**OLLOWING upon the declaration of war between Austria-Hungary and Serbia, Germany has gone to war with Russia and France and entered Belgian territory *en route* for France; in consequence the British Government presented an ultimatum to Germany on Tuesday, August 4, and war was declared that night. The British Navy and Army, with their Reserves, have been mobilised, and the Territorial Forces also. Prior to the Bank Holiday the financial strain was great, and Parliament agreed to extend the holiday to and including Thursday, August 6, while a Moratorium Bill was passed through all stages in both Houses of Parliament on Monday. It is gratifying to state that British merchants and all classes of traders are facing the situation with calmness.

### WHOLESALESAERS AND RETAILERS.

THE question of conserving the drug-supply, owing to the increased demand which may be caused for medicines and to the disorganisation of the supply of raw materials which come from abroad, is a serious problem with the wholesale houses. It is not unmountable, and many difficulties can be successfully overcome if the situation is met with calmness and consideration. Most of the wholesale drug-houses have been forced to protect themselves by withdrawing their price-lists and quotations, but our personal inquiries have convinced us that this does not mean that large profits are to be made on existing stocks. To make the position clear, it should be borne in mind that wholesale houses require to make contracts with manufacturers either for raw material, partly manufactured goods, or a finished product. These contracts are entered into with dealers and manufacturers located many of them on the Continent. In contracts there is always a clause protecting the parties in case of *force majeure*, and, this being taken advantage of, it is obvious that until other means are taken to obtain supplies, there must be disorganisation of trade. It must be pointed out that there is in most cases no choice but to put into force the exempting clause, as it is obvious that an agent for German-made chemicals, with all the skill in the world, cannot possibly obtain supplies at the present time, when the sea-borne trade of Germany has ceased. A point we wish especially to emphasise is that many of the difficulties will be overcome in a short time, as the resources of British manufacturers are practically unlimited. The shortage of bismuth salts, which has made itself apparent, is due to the operations of an international syndicate, but no one can doubt that as early as possible supplies of the metal will be forthcoming from South America, and, syndicate or no syndicate, when the metal is in hand the bismuth salts can be on sale in a few days. Bromine comes chiefly from Germany, but supplies can doubtless be arranged from the Chilean nitrate-works, which have not been able to compete owing to freight difficulties. This would get over the problem of potassium bromide, except that we depend upon Germany very largely for potassium carbonate. Pending supplies from Canada and other sources the sodium and ammonium salts may very well be employed. There is plenty of quinine and cinchona-bark in the country which can be prescribed in place of synthetic febrifuges. Salicylates are in short supply, but, while these are not indispensable, there is no doubt that some of our manufacturers will start making them, and when the crisis has passed will have established a business in British-made salicylates which will amply reward the manufacturer. Plenty of carbolic acid (the raw material for salicylates) is produced in this country, but it must not be forgotten that the demand for carbolic acid must increase. Chloroform-makers employing acetone as the raw material will need to revert to spirit, which large quantities are in bond. Citrates and

tartrates are presenting a difficulty, but there would be more available for medicinal use if other acids—e.g., phosphoric—were substituted for beverage purposes. Epsom salt is a by-product from the German potash-mines, but is also made from other minerals, and sodium sulphate can be employed in place of it. The wholesale houses are rightly refusing to supply orders which are clearly speculative, but there is no doubt that with a reasonable amount of "give and take" the splendid organisations for the manufacture and distribution of drugs and chemicals will speedily adjust themselves to such a condition of affairs as is bound to bring out all the best qualities of the race.

### DISPENSERS FOR THE WAR.

WE append a summary of the particulars of the conditions of service as contained in a *Special Army Order* issued by the War Office on August 4:

Men desirous of appointment to the Royal Army Medical Corps who are qualified as dispensers will be required to produce the Minor certificate of the Pharmaceutical Society, or a similar diploma, such as that issued by the Societies of Apothecaries in London or Dublin, or testimonials from a medical practitioner or chemist that they have performed the duties of dispensers during the last three years.

Attendants in skiagraphy and electro-therapy, operating-room attendants, and laboratory attendants will be required to produce evidence of qualification satisfactory to the medical officer who examines them, from a hospital, laboratory, or other institution, or from an employer.

Applicants for appointment as hospital subordinates will be required to produce evidence, such as certificates in nursing or proficiency in first-aid and ambulance work, from recognised corps, institutions, associations, or societies, satisfactory to the medical officer who examines them, that they possess a fair knowledge of nursing and ambulance duties. All clothing and necessaries—food, etc.—will be provided, and married men and widowers will draw separation allowance under the usual Army conditions.

A bounty of 5*l.* will be paid on final approval, and pay will be at the rate of 6*s.* per day.

*Application for enlistment* should be made to the depots of the Royal Army Medical Corps or to Recruiting Offices, and candidates should state that they wish to enlist under the Special Army Order of August 4 *re* the enlistment of civilians for temporary service during war.

### WHAT CAN CHEMISTS AND THEIR ASSISTANTS DO?

Mr. H. E. BELSHER, President of the Walsall Pharmaceutical Association, writes:

"War is now unfortunately an accomplished fact, and the Government in need of dispensers. May I suggest that the Chairmen of all the Pharmaceutical Committees call an emergency meeting of chemists, assistants, apprentices, and doctors' dispensers (male) (1) to discuss the situation; (2) to take the names of those willing to volunteer for active service; (3) to take names of those willing to act in the British Isles as dispensers in the medical branch of a Citizen Army, if formed; (4) to arrange for keeping open the situations of those who volunteer; (5) to make such adjustments as may seem necessary at home for continuing efficient service under the National Insurance Act with a reduced staff? This is no time to labour the question of our status and terms of payment, as every citizen's first duty is to the State. The Pharmaceutical Committees in this way may render valuable aid to the Government by collecting and tabulating the above particulars in readiness."

We would remind our readers that Pharmaceutical Committees are engaged in a State organisation for service *at home*. That organisation and British pharmacy are in touch through their representatives, who will, in the natural course of events, utilise the outcome of such suggestions as the above.

### MUNITIONS OF WAR.

A PROCLAMATION by King George V., prohibiting the export of warlike stores, was published in a supplement to the "London Gazette." Among the items included in the prohibition are: Acetone, benzol, carbons required for searchlights, chrome and ferro-chrome, creosote, dimethylaniline, fulminate of mercury, gunpowder, nickel and ferro-nickel, oil (blast-furnace), oil (coal-tar), oil-fuel (shale), oil (olive), oil (mineral, lubricating), petroleum (fuel-oil), petroleum (gas-oil), petroleum (spirit or motor-spirit, including Shell spirit), surgical bandages and dressings, toluol, zinc. The Austro-Hungarian



"Reichsgesetzblatt" publishes a Ministerial Order, dated July 25, which prohibits the exportation from Austria-Hungary and the transit through Austria-Hungary to Servia of the following, among other articles: Sulphur and sulphuric acid, saltpetre and nitric acid, calcium carbide, nitro-toluol, crude and refined glycerin, acetone, sulphuric anhydride, and picric acid.

Belgium has prohibited the exportation of sulphur, nitric acid, lead, German silver, zinc, and pewter; and prohibitions from Germany include nitrate of potash, ammonia, and soda; nitric acid; camphor, natural or synthetic; acetate of lime; acetone, acetic ether; ethyl ether; carbolic acid; benzol; nitrated cotton and cellulose; picric acid; nitrate of barium; phosphorus; toluol, cresol, crude and meta-cresol; turpentine oil, trinitrotoluol; dinitrotoluol; diphenyl-amin; sodium oxalate; antimony; quicksilver; wolfram metal; colophony, etc.; mineral oils, crude or refined (including petroleum and petrol); tar oils. Surgical dressings and bandages, medicinal products, surgical instruments, and apparatus as follows: Pure carbolic acid; mercury and sublimate iodine; potassium iodide and sodium iodide; iodoform; chloroform; pyrazolonum phenyldimethylum and derivatives thereof (pyramidon, etc.); powdered opium; morphia and salts thereof; codeine phosphate; paraformaldehyde; hydrochlorate and sulphate of quinine, arekoline; salvarsan; wadding, gauze, and other materials for bandaging; surgical and other medical (including dental) instruments and apparatus; bacteriological apparatus; material for bacteriological cultures (agar, gelatine, peptone); vaccine for preventing and serums for preventing and curing infectious diseases; animals for experiments.

#### PERSONALIA.

MR. R. C. ADE, the London manager of the Hoffmann-La Roche Chemical-works, Ltd., of Basle, has left London in order to join the German colours.

MR. ARTHUR T. WHEELER, of Messrs. Henry Wheeler & Son, drug-merchants, 9 Great Tower Street, E.C., has joined his colours, the "B" Battery of the Honourable Artillery Company.

MESRS. EDWARD COOK & CO., LTD., soap specialists, Bow, E., report that the soap-trade is in a normal condition at present, and there is no anxiety as to stocks for several months ahead.

MAJOR ROPER, a keen Territorial and a well-known Mincing Lane drug-broker (associated with the firm of Messrs. Bowyer & Bartleet, Fenchurch Street, London, E.C.), has been assigned his position with his regiment.

MR. ROBERT REITMEYER, principal of Messrs. Reitmeyer & Co., 63 Crutched Friars, London, E.C., who has been motoring through France and Germany with his family, is now at Chaux de Fonds, Switzerland.

MR. C. A. WEST, president of the American Camphor Co. and vice-president of the Eastern Drug Co., Boston, who has been travelling on the Continent for several weeks past, was in Moscow on July 27. Mr. West is well known in London and the Continent, and has undoubtedly had some exciting experiences.

MR. AND MRS. JONES (Swinton), whose wedding is this week announced, crossed from Harwich to the Hook of Holland with the intention of spending their honeymoon in Holland and Belgium; but, on the advice of a Dutch Esperantist at Rotterdam, they returned to Harwich, the passage taking several hours longer than usual. They are spending the remainder of the honeymoon on the Yorkshire coast.

MR. GEORGE MERCK, eldest son of the senior partner of the Darmstadt firm, left Queenborough for Flushing on Tuesday, August 4—the last boat to leave this country for the Dutch port. Mr. Merck has passed his pharmaceutical examinations in Germany, and was spending a year as assistant to Mr. Ernest Quant, F.C.S., pharmacist, Torquay. Mr. Merck is free from military service, and is going to his parents' home at Darmstadt.

MR. WILLIAM MAIR, F.C.S., of Messrs. Fletcher, Fletcher & Co., Ltd., and Mr. Thomas Alexander, of the Royal Infirmary, Edinburgh, are among the party of American pharmaceutical pharmacists and their lady friends who are stranded on the Continent. Since we last reported the movements of the party (*C. & D.*, July 25, p. 114) the "Zeitschrift des Allgem. österr. Apotheker-

Vereines" of Vienna (received here on August 4) reports as follows:

On July 21 the party of American pharmacists who are visiting Europe arrived at Vienna, where they were welcomed by a committee of representatives of the Pharmacists' and Assistants' Association. In the evening they were entertained at the Hôtel Monopol, and heartily welcomed by Dr. Firbas and Dr. Heger. Dr. Alpers replied. The following day the University was visited, and there was an official reception at the Town Hall by the Vice-Mayor. In the morning of July 23 the gentlemen of the party visited some of the pharmacies in the town and the Imperial Military Drug Depot. In the afternoon they were received by the Austrian Pharmacists' Association, and welcomed by Dr. Stohr. This was followed by a tour of inspection through the institute, collections, and offices of the Association. In the evening a farewell dinner was given on the Kahlenberg, when Dr. Alpers expressed his thanks for the warm reception he and his colleagues had received, and the hope that he would soon be able to welcome his Austrian colleagues on a return visit to the United States.

The latest advice from Mr. Mair is a postcard dated Berne, Wednesday, July 29, in which he states that he was one of a party of twenty who spent a most charming day with Professor Tschirch, first at the Berne University, then at the Exhibition, and finally at the Professor's villa. It was Mr. Mair's intention to go on to Darmstadt.

#### MISCELLANEOUS.

BRUNNER, MOND & CO., LTD., Northwich, are paying 10s. a week to the wives and 1s. for each child of Reservists, Territorials, and Ambulance men in their employ.

BOOTS, CASH CHEMISTS, LTD., are paying half salaries to married men on service with Army, Navy Reserve, and Territorials, and the places of all employes on service are to be kept open. From Nottingham 120 employes are serving.

THE cable companies are now all under the control of the British Censorship. All cables have to be in plain English, fully addressed and signed, which makes cabling expensive, so that American buyers will understand the position.

At a special meeting of the Walsall Pharmacists' Association on August 5 to consider the supply of Army dispensers, four names were given in, and the employers of the assistants who were present pledged themselves to keep open the situations at present held by the men.

MR. NELSON RICHARDS, director of Messrs. John Morgan Richards & Sons, Ltd., who is with his father at Steephill Castle, Ventnor, Isle of Wight, writes: "We have sent the following wire to the office to-day: 'Any members of staff wishing to join forces of the Crown, places will be kept open. Married men, half-pay; single men, quarter pay.—RICHARDS.'"

THE directors of Edward Cook & Co., Ltd., Bow, London, E., called a meeting of their staff and employes on August 5, when Mr. Thos. Alex. Cook impressed upon the gathering the importance of keeping calm, living up to the dignity of the nation, and economising in every expenditure, it being the duty of every man so to conduct himself as to be a help to the Government and the country. Three cheers were given for the King and Queen, and a rousing cheer for soldiers and sailors.

#### Things to Do.

##### HOME-MADE ACETANILIDE.

Haeussermann advocates the preparation of acetanilide in the pharmaceutical laboratory, and gives in the "Pharm. Zeit." the following directions for its easy and instructive preparation: Place 75 grams of pure aniline in a flask with a capacity of 400 to 500 c.c., add the same amount of glacial acetic acid and 3 to 4 grams of zinc chloride. The flask is closed with a cork holding a glass tube about 1 metre in length, which serves as a reflux condenser. The contents of the flask are heated to boiling by means of an ordinary small spirit-lamp with a small flame, and the mixture kept at gentle boiling for three hours. The product of the reaction is poured into about 1,500 c.c. of lukewarm distilled water, stirring vigorously. After standing for a few hours it is filtered, and the filtrate washed with cold water to remove the zinc chloride. The residue is crystallised from hot water. The absence of zinc chloride is determined by the melting-point and by the absence of a residue on heating a small amount on platinum foil. The above amounts yield about 50 grams of acetanilide.



## TRADE NOTES.

THE BRITISH DRUG HOUSES, LTD., Graham Street, City Road, London, announce that they will supply goods at the lowest possible rates consistent with the prevailing conditions.

MESSRS. ARTHUR H. COX & Co., LTD., Brighton, as manufacturers of pills and compressed tablets, advise customers to anticipate several months' supply. They will not increase their prices while their present stocks last, and will fill orders as promptly as is possible.

MESSRS. A. WANDER, LTD., manufacturing chemists, 1 and 3 Leonard Street, Finsbury, London, E.C., are removing their registered offices and warehouses on Monday, August 10, to 45 Cowcross Street, E.C., which will give them greater accommodation and facilities for their increasing business.

MESSRS. MAY, ROBERTS & Co., LTD., druggists' sundriesmen, London and Dublin, are making no advance in prices while present stocks last. They will deliver the greatest possible proportion of all orders entrusted to them without delay on their part, and sell at normal prices for as long a period as possible.

COLOURED ANÆSTHETICS.—Mr. E. Merck, Darmstadt, and 66 Crutched Friars, London, E.C., informs us that he is prepared to supply at customers' special request, and without extra charge, ether coloured green and chloroform coloured red, in accordance with Dr. Barton's suggestions. (See *C. & D.*, July 11, p. 34.)

MESSRS. S. MAW, SON & SONS, Aldersgate Street, London, are taking all steps to conserve supplies of druggists' sundries, surgical dressings, etc., of which they hold large stocks. In common with wholesale houses generally, they have temporarily withdrawn their printed price-lists, but they assure the trade that they will execute normal orders at current prices.

LUFF'S GOUT-REMEDY.—Messrs. Burroughs Wellcome & Co., Snow Hill Buildings, London, E.C., have issued tabloid colchicine and nux vomica compound, according to the formula devised by Dr. Luff for the treatment of gout, and reprinted from the "British Medical Journal" in our issue of April 4, p. 528. The form in which Messrs. Burroughs Wellcome & Co. have issued the remedy is convenient, and it is sent out in bottles of 25 and 100 tabloids.

DECORATED TINS.—As reported in our issue of July 25, Messrs. Shirley Brothers, Ltd., Rockingham Street, London, S.E., have been appointed sole agents in Great Britain and Colonies (except Canada) for the Metal Package Co., Brooklyn, N.Y. Samples of the tins manufactured by this firm have been submitted to us, and we greatly admire the artistic colouring and good finish, which are quite up to the best standard of this class of goods. Chemists and others interested can have particulars on application to the above address.

INTERNATIONAL EXHIBITS.—Messrs. Burroughs Wellcome & Co., Snow Hill Buildings, London, E.C., are exhibiting at the International Dental Congress, which has been held this week at the London University, South Kensington, S.W., and in this connection the firm has produced an interesting illustrated souvenir entitled "The Dental Art in Ancient Times." This traces the progress of dentistry from prehistoric to Roman times, and covers new ground. Messrs. Burroughs Wellcome & Co. had also prepared an exhibit in connection with the International Veterinary Congress, which was opened at the Caxton Hall, Westminster, on August 4, but closed owing to the European crisis. This includes veterinary serums and vaccines and solid corrosive sublimate. The last-named solid is very largely employed at the present time in veterinary practice for the preparation of antiseptic douches in the treatment of contagious abortion in cows.

The exports of china-root from Canton during 1913 amounted to 4,802 cwt., against 6,507 cwt. in 1912 and 6,952 cwt. in 1911.

## ENGLISH AND WELSH NEWS.

Subscribers are invited to send to the Editor newspapers containing news of trade interest. Please mark the items.

### Brevities.

Smethwick Town Council has granted an agri-horticultural poisons-licence to Messrs. Proffit & Westwood and to Messrs. W. H. Sampson & Sons.

Alterations and additions are to be made to the premises of Timothy White & Co., Ltd., chemists and druggists, 14 Chapel Street, Petersfield (Hants).

Dr. R. A. S. Sunderland, the resident medical officer of Hull Workhouse, has suggested that a part-time dispenser should be employed, as this would conduce to economy.

The Dukinfield (Cheshire) Bench on July 30 transferred the medicated-wine licence held by Alderman Jas. Anison, chemist and druggist, at 117 King Street, to Mr. F. S. Anison, chemist and druggist.

A fire occurred in the charcoal sheds of Messrs. Bradley's Chemical-works, Brampton, this week. Having a fine supply of water from Messrs. Robinson & Sons' reservoir, the fire brigade soon extinguished the outbreak.

Last week a milk-float was accidentally backed through the window of the shop of Messrs. Stiles & Son, chemists and druggists, French Gate, Doncaster, smashing the glass, whereupon the firm exhibited a bill inviting customers to enter by the doorway and not by the window.

At Marlborough Street Police Court on August 1, the hearing of evidence against John Michael Desmond, described as a chemist, who was charged with, on or about April 15, obtaining by false pretences the sum of 50*l.* from Alfred W. Goddard, Regent Street (see *C. & D.*, July 18, p. 36, and August 1, p. 40), was continued before Mr. Denman. The accused was committed for trial, the Magistrate refusing to reduce the bail, which was previously fixed at 100*l.*

### Untested Clinical Thermometers.

In a report on the work of the tuberculin dispensaries of Derbyshire during the past year, Dr. J. Court states that none of the thermometers supplied to the dispensaries had been tested, some of them being quite useless and others giving erroneous readings. Dr. Court urges that every thermometer used should have the National Physical Laboratory certificate of accuracy, especially in view of the fact that the dosage of tuberculin by injection is to a great extent regulated by the daily temperature record, and it is essential that accurate instruments should be used. Dr. Court further finds that the majority of the clinical thermometers placed upon the market have not been tested, and that, while it costs 1*s.* 2*d.* to have each thermometer tested at the National Physical Laboratory, Teddington, some of the large London hospitals buy them at 4½*d.* each. He quotes the director of the above laboratory as authority for his statement that the majority of the instruments put on the market are untested and untrustworthy.

### Institute of Chemistry.

At the examinations held in London, Dublin, and Glasgow, twenty-three candidates presented themselves for the Intermediate examination, and eleven passed: A. J. Boyd, R. G. Browning, R. C. Denington, A. O. Jones, J. King, E. Leitch, B.Sc. (Glas.), G. W. Moore, P. D. Oakley, P. W. Rait, E. L. J. Stockdale, B.Sc. (Lond.), and H. M. Webb. Of twenty-eight candidates for the Final (A.I.C.) examination thirteen passed: In *Mineral Chemistry*, H. Trickett and H. Vernon, B.Sc. (Lond.); in *Organic Chemistry*, J. G. Duncan, T. H. Durrans, B.Sc. (Lond.), S. H. Greenwood, L. A. Jordan, B.Sc., A.R.C.S. (Lond.), L. Orange, B.Sc. (Lond.), W. S. Ritchie, B.Sc. (Lond.), F. W. Snelgrove, B.Sc. (Lond.), J. W. Tait, M.A. (Edin.), and F. D. White; in the *Chemistry (and Microscopy) of Food and Drugs, Fertilisers and Feeding-stuffs, Soils, and Water*, J. H. Christie, B.Sc. (Lond.), and C. G. Collins. Two candidates were examined at Johannesburg and passed—in *Metallurgical Chemistry* D. Millin, B.A. (Cape), and in *Organic Chemistry* A. Kloot, B.Sc. (Lond.).



**Contracts.**

The following have been settled:

Salford Town Council.—Mr. S. Livesley, for carbolic soap.

Marlybone Guardians.—Messrs. F. R. Butt & Co., for supply of an x-ray apparatus.

Ince Urban Council.—Killgerm Co., Ltd., for carbolic powder (15-per-cent.); Newton, Chambers & Co., Ltd., for Izal fluid; Sanitary Dry Line Co., for camphorine powder.

**Birmingham.**

Mr. Frederick Butwell Winfield, of Cambridge and Birmingham Universities, son of Mr. F. Winfield, chemist and druggist, Solihull, was one of the ninety-seven candidates who received the diplomas of L.R.C.P. and M.R.C.S. on July 30.

Our local correspondent is gratified to observe in his peregrinations round the local flower and fruit shows that pharmacy is prominent as spectator, prize-giver, and prize-winner, also taking part in directing the sports usually attendant on these gatherings.

The exodus of inlanders to the seaboard has made a considerable difference to trade, and this, together with the extended Bank Holiday and the closing of most of the principal works of the city, has left pharmacy with much time on its hands to be utilised in securing a brief holiday and rest to its devotees.

A very interesting floral display to advertise a proprietary is on view at the New Street shop of Boots, Ltd. Real flowers and fruits were formerly used, which required constant renewal, but now artificial substitutes, which are excellent imitations, have taken their place. The blaze of colour in almost all the local window-displays continues, but has become more regal in shade and in kind.

Coventry is about to launch an extensive system of street widening and extension of its boundaries at a cost of 300,000*l*. The scheme has met with strong opposition, as it is feared that "Butcher's Row"—a narrow street at the back of Mr. A. B. Clarke's pharmacy, and a very old and interesting relic of bygone days—may have to go. Amongst the stalwarts of the opposition is Colonel Wyley, an Alderman and a well-known local citizen.

At Coleshill Police Court on July 29, Edgar Arthur Bown, described as of Lock House, Dunton, Curdworth, was brought up charged with stealing a cap and silk scarf, value 7*s*. 6*d*., the property of George Goodger, Dunton, and with fraudulently obtaining board to the amount of 3*l*. 15*s*. and sums of money totalling 14*l*. 10*s*., by falsely representing that he was employed at Birmingham General Hospital as a dispenser and earning 50*s*. per week. Evidence showed that accused had arranged to enter for a student's course at the General Hospital under the pharmacist, but had never attended. The Bench decided to send prisoner for trial at the Quarter Sessions, the charge of theft being dismissed.

**Sale of Food and Drugs Acts.**

The Medical Officer of Health of the City of London has issued his report for the year 1913: Forty-six samples of drugs were purchased for analysis during that period, and all were returned as genuine.

During last quarter thirty-four samples of drugs were purchased for analysis in Greenwich. With the exception of a sample of boric ointment, which was 13 per cent. deficient in boric acid, all were satisfactory.

The Public Health Committee of Lancashire County Council report the result of proceedings instituted against twelve persons for selling samples of salt of tartar which contained from 2.9 to 10.6 grains of arsenious oxide per lb. All the summonses were withdrawn on payment of costs.

Of twenty-eight samples of drugs taken for analysis in the East Riding of Yorkshire during the quarter, all were found to be genuine except one sample of heavy magnesia, for which the effervescent preparation was supplied, and one sample of sweet spirit of nitre, which was deficient in ethyl nitrite to the extent of 22.4 per cent.

Dr. William H. Whitehouse, medical officer of health for the borough of Deptford, reports that eight samples of drugs were submitted for analysis during the past

year, all being certified as genuine. Two samples of linseed were reported against, one containing 10 per cent. of foreign seeds, and the other 6.3 per cent. of foreign seeds and matter.

The public analyst for the borough of Lambeth examined twenty-six samples of drugs during the past quarter. One sample of ammoniated tincture of quinine was found to be deficient in quinine sulphate to the extent of 25 per cent., and two samples of Gregory's powder were found to be made with carbonate (not oxide) of magnesium. All the other samples were genuine.

Twenty-five samples of drugs were analysed in the borough of Southwark during the past quarter, all being found genuine. The Public Health Committee of the borough have considered a letter from the Town Clerk of Deptford regarding the dismissal by a Magistrate of a summons against a vendor of raisin-wine, which contained 3.83 grains of salicylic acid per pint. The Southwark Council decided to support Deptford's representation to the Local Government Board as to the necessity of regulations being made fixing the amount of preservative to be allowed in British wines, and also making it illegal to sell wines containing a preservative unless the presence of such preservatives is declared to the purchaser.

**IRISH NEWS.**

Subscribers are invited to send to the Editor newspapers containing news of trade interest. Please mark the items.

**Brevities.**

The cost of drugs is alleged by the Local Government Board to have been excessive in the Ballycastle dispensary of the Killala Guardians. The medical officers, however, reply that more patients were treated than have been recorded.

Messrs. Boileau & Boyd, Dublin, have been declared contractors to the King's County Infirmary for the supply of medicines at 20 per cent. discount. The contract for surgical appliances was given to Messrs. Fannin & Co., Dublin, at 33½ per cent. discount.

**Motor-ambulance Collision.**

In the King's Bench Division, Dublin, on July 31, Mr. Justice Molony delivered judgment on the appeal brought by Messrs. Hugh Moore & Alexander, Ltd., wholesale druggists, Dublin, against the decision of the Recorder of Dublin in an action instituted against them by the Corporation of Dublin (see *C. & D.*, August 1, p. 41). Mr. Justice Molony reversed the Recorder's decision, holding that negligence by the defendants had not been proved.

**SCOTTISH NEWS.**

Subscribers are invited to send to the Editor newspapers containing news of trade interest. Please mark the items.

**Brevities.**

Mr. James Baxter, chemist and druggist, Grangemouth, has been appointed a Justice of the Peace for the county of Stirling.

The pharmacy known as Dun's Stores, Ltd., 483 Argyle Street, Glasgow, was recently offered for sale owing to the retiral of the proprietor from business.

**Aberdeen.**

During the week medical men in the city have been anxiously inquiring about the supply of drugs likely to be affected by the war. Chemists supplying nursing homes and the like with drugs and appliances have been requested to have as large a stock as possible.

At a meeting of exhibitors at the recent exhibition in connection with the annual meeting of the British Medical Association, held in Marischal College, it was agreed to send a protest to the British Medical Association pointing out that unless one evening be allowed the delegates to visit the exhibition they would not again exhibit. It was stated that less than 200 delegates visited the exhibition.



**Edinburgh.**

The annual report of the Chief Inspector of Weights and Measures for the city states that provision has been made for exempting certain trades, including that of chemist and druggist, from an annual visit of inspection, the period having been extended to two years.

Business locally has suffered little from the war as yet, rather the reverse; but the retail prices of many everyday products—such as syrups—will require immediate revision. Sugar at the beginning of this week was unobtainable in quantity, and several pharmacists, who thought of laying in a stock, were asked to pay fancy prices for a few pounds by the dealers from whom they usually obtain their supplies. Fortunately, some chemists have fair stocks of saccharin tablets.

**SOUTH AFRICAN NEWS.**

(From "C. & D." Correspondents.)

"The Chemist and Druggist" is subscribed for and supplied weekly to all the members of the seven Chemists' Societies in British South Africa.

**Cape Province.**

MR. MAGNESS ELGAR has been lying in the Addington Hospital, Durban, rather seriously ill.

MR. J. AUSTIN THOMAS, chemist, Parow, near Cape Town, has disposed of his business there as from August 1 to Mr. Charles A. Fauls, who had been managing it during a trip that Mr. Austin Thomas had round the coast by the *Armada Castle* as far as Durban and back. Mr. Austin Thomas will in the meantime have a quiet spell.

**CHEMISTS' HOURS.**—The retail drug-trade of Cape Colony are now organising, with a view of petitioning Parliament not to exempt chemists from the General Dealers Act in respect of the closing hours. This is done with the idea of giving chemists shorter hours, as it is felt that, until it is compulsory, it will be hopeless to get uniformity in the matter.

**O.F.S. Medical and Pharmacy Council.**

A MEETING was held at Bloemfontein on July 10, when the following examiners were appointed to conduct a special chemists' and druggists' examination on July 22 and 23: *Chemistry and Physics*: Professor Rindl and Mr. Weall; *Pharmacy, etc.*: Messrs. S. S. Hewitt and J. Rawling; *Botany*: Professor Potts; *Prescriptions*: Drs. S. M. de Kock and S. G. Friedmann, and M. Antos. The ordinary Chemists' and Druggists' examination was fixed for August 26 and 27. The examiners appointed for the special examination were chosen, but Mr. Hewitt excused himself on the ground that he was helping one of the candidates in his studies. A substitute will be selected on the suggestion of a name by Mr. Rawling.

The manager of the Central Pharmacy, Senekal, had asked whether "Gow's Remedy" could legally be sold by storekeepers. The Secretary was directed to reply that the Committee suggested that the police authorities should take steps to have the drug analysed. Mr. H. Glover, chemist and druggist, wrote to ask whether a permit for the sale of poisons granted to storekeepers would hold good for the balance of the year for which it had been issued if a qualified chemist started business prior to the expiration of the permit. The law allows such permits to be issued by magistrates to storekeepers in places where there is no chemist within six miles. The Secretary was instructed to reply that, according to an opinion given by the Government legal advisers, the permit would hold good for the year for which it had been issued.

**A NEW SIDE-LINE.**—The latest side-line of U.S.A. departmental drug-stores is "bathroom fixtures": in fact, in some of the stores you go into you would almost think you were in a plumbing establishment. Although we may sometimes smile at the incongruity of the departments, yet the articles are presented in such a pleasing way that sales are made, and made promptly, and wherever a purchase is made of a large consignment of particular articles there is always a good deal of care taken to make these goods a feature not only in the window, but also in advertisements.

**FRENCH NEWS.**

(From the "C. & D." Paris Correspondent.)

**SNAKE-VENOM.**—The Academy of Sciences has been informed by M. Calmette that samples of cobra-venom, kept in scales and powder from 1907 until 1913, had diminished in virulence by 16.5 per cent.

**THE PHARMACISTS** returned to the French Parliament at the recent General Election include, besides our old friends MM. Barthe (Béziers), Bachimont (Aube), Cabrol (Aveyron), Nouhard (Haute-Vienne), Renard (Nièvre), Vincent (Côte-d'Or), and Schmidt, of the Vosges (all old members), MM. Baduel for Murat (Cantal), Champetier, Privas (Ardèche, the home of M. Astier); Charpentier (Sedan), Morel (Montreuil), Pezet (Montpellier), Reynouard (Issure), and Bernard (Paris).

OUR PARIS CORRESPONDENT, writing on August 4, says: "Since I was in London a week ago the war preparations have advanced with rapid strides, and hostilities have commenced. I will continue to send for the *C. & D.* any news of interest. Enclosed I send an article on French military pharmacy by M. Balland, who writes in 'La Science et la Vie'":

The Central Military Pharmacy at the Invalides was recently brought up to date as a manufacturing establishment and formally inspected by the Minister of War. Founded in 1792, the Central Army Pharmacy rendered such important services during the Revolution and the Empire that it was not abolished at the Restoration. In 1814 it was transferred to premises in the Rue du Cherche Midi (now the military prison); then, in 1841, to the Rue de l'Université; and, finally, in 1900, to the Invalides, Paris. M. Klotz, in his 1906 Budget Report, stated that the Central Pharmacy annually purchased over 800,000 francs (32,000*l.*) worth of raw drugs, which, after their treatment in the Central pharmacy, represents a value of 4,000,000 frs. to 5,000,000 frs. (160,000*l.* to 200,000*l.*) in medicaments. Army expenses are constantly increasing, and M. Klotz's 800,000 frs. has now grown to a million francs (40,000*l.*)—i.e., about one-tenth of the sum annually voted for the sanitary services of the French army. A large reserve of medicaments is always kept on hand in case of need—epidemics, colonial expeditions, etc. The cellars are devoted to the storage of these goods. On the ground and first floors are the manufacturing workshops and the storage for current output. The Research Laboratories are a feature of special interest. Here all raw drugs, etc., are examined on entry. New analytical methods are constantly sought for the purification of drinking-water during military operations in savage or far-off climes. The process of emetine extraction, which reduced the price of this alkaloid from 13*s.* to 13*d.* per gram, was discovered in this laboratory. Separate rooms are set aside for (1) sterilisation of surgical sundries (silk, catgut, horsehair, etc.); (2) preparation of ampoules containing exact doses of powerful medicaments, such as sodium cacodylate, caffeine, chloroform, cocaine hydrochloride, ergotin, ether, morphine, and stovaine; (3) manufacture of compressed tablets; (4) rectification of chloroform; (5) various operations connected with powders, tinctures, and extracts. Radiographic and microscopic apparatus, clinical thermometers, and other delicate instruments have likewise special and appropriate premises. The staff comprises one first-class principal pharmacist, who is the head of the establishment; two first-class and two second-class pharmacist-majors; an officer of administration, and twenty-five to thirty workmen and workwomen: this latter figure varies according to circumstances. A few figures are given as to the annual output of the establishment. In twelve months the Central Pharmacy forwarded to Morocco alone from 5 to 6 cwt. each of antipyrin, bismuth salicylate, ipecacuanha, and sodium salicylate; 5 tons of quinine tablets, and 2 tons of bismuth subnitrate. A couple of cwt. (107 kilos.) of iodine, a similar quantity of quinine hydrochloride, 3 cwt. of ipecacuanha powder, 4 cwt. of potassium bromide and considerably over half a ton of potassium iodide; and 7½ cwt. of cinchona extract do not complete the list. We have still to add 182,000 ampoules of quinine-urethane, and numerous phials of serum—9,850 antidyenteric, 1,640 antidiphtheritic, 3,150 anti-plague, 5,880 antitetanic, 1,170 antivenomous, 690 antistreptococcal, and 530 anti-meningococcal. The "medical comforts" included 11 tons of tea, 32,000 lb. of "generous Banyuls wine," and 41,800 bottles of champagne, with 64,000 bottles of Vichy water.

THE TUBERCULIN-TEST showed that 70 per cent. of dairy cattle in Maryland last year suffered from tuberculosis.



## AUSTRALASIAN NEWS.

"The Chemist and Druggist" is subscribed for and supplied weekly to all the members of nine Chemists' Societies in Australia and New Zealand.

### The Commonwealth.

**AMENDING THE TARIFF.**—At the eleventh meeting of the Central Committee of the Metropolitan Chemists' Association, Melbourne, on June 11, Mr. Leete, representing the South Suburban Chemists' Association, remarked that Messrs. Rankin, Bailey, and Owen had formed a deputation to the wholesalers to discuss the proposed increase in duty on proprietary medicines from 10 to 15 per cent. The retailers do not want the extra duty imposed. It was suggested that the Government should be approached to ask that the duty on rectified spirit should be lowered, and that tinctures and liniments might be made in bond at a duty of, say, 5s. per gal.

### New South Wales.

**THE PHARMACY BOARD.**—At the meeting on June 9 it was decided that a correct application for registration in New South Wales from a chemist registered in Great Britain should include each certificate of the examination passed by him in Great Britain. If any of the certificates have been lost he should obtain a special certificate embodying all others. Mr. McKimm was doubtful as to the powers of the special certificate, and asked if it is necessary to produce the certificates the applicant actually had in addition to the special certificate. He was assured only the special certificate is necessary. Mr. Wadsworth said that if the certificates were lost and the Registering Authority knows the applicant had passed the examinations, it is easy to secure a special certificate.—Among the chemists registered under the Pharmacy and Poisons Act occurs the name of Alexander James Taylor, Rockdale, chemist and druggist, Great Britain.—Messrs. Wadsworth, Gray, Short, Loney, and Forster reported that they had waited on the Premier and submitted a scheme for the establishment of a school of pharmacy at the Sydney University.

### Queensland.

**PHARMACY LEGISLATION.**—The Pharmacy Board is making another effort to secure amendment of the Pharmacy Act during the forthcoming Session of Parliament.

**SIR WM. MACGREGOR.**—In anticipation of the retirement of the Governor of Queensland, Sir Wm. MacGregor, K.C.M.G., M.D., a meeting of Brisbane citizens was held in the Town Hall to consider ways and means of doing him honour. Those present subscribed a large sum of money, and a committee was formed with the object of collecting a further sum to establish a medical school in the University, which was the form of institution favoured by his Excellency, who is a medical graduate of Glasgow University. Sir William is Chancellor of the Queensland University, and takes a keen interest in educational matters. He presided at the opening of the College of Pharmacy on one occasion.

### Victoria.

**MELBOURNE COLLEGE OF PHARMACY.**—A joint deputation from the Pharmacy Board and the Pharmaceutical Society waited upon the Minister of Lands on June 3 to ask him to confirm the title of the land upon which the College premises are built. It has been discovered that the area is only temporarily reserved for the purposes of a college, and this is thought to be insufficient security for the buildings which have been erected on the site at a cost of 6,000*l.* The Minister of Lands said he thought the Board need have no fear of being disturbed under any circumstances, but he would look into the position, as it might be necessary to pass an Act of Parliament to give the title asked for.

**FÉDÉRATION INTERNATIONALE PHARMACEUTIQUE.**—The meeting which was to have been held at Berne on August 7 and 8 has been postponed owing to the European political situation.

## LEGAL REPORTS.

### TRADE LAW.

**Chemists' Accounts.**—At Berwick-on-Tweed County Court on July 28, Lyle & Co., manufacturing chemists, Berwick, sued Mr. A. A. Beck, chemist and druggist, Green Street, Victoria Park, London, for 9*l.* 3*s.* 3*d.* due for goods supplied. Defendant had remitted 10*s.*, and promised to pay the balance by 10*s.* per month, but an order for 1*l.* per month was made.—The same plaintiffs sued Mr. A. E. Black, Crouch End, London, for 1*l.* 6*s.*, and Mr. Ralph Kelsey, a Yorkshire chemist, for 16*l.*, and in these cases orders for payment were made.

### High Court Cases.

Unless when otherwise stated these cases have been heard in the High Court of Justice, London.

#### USE OF THE WORD "DENTAL" IN COMPANY TITLES.

On Friday, July 31, a Divisional Court of the King's Bench Division, composed of the Lord Chief Justice, Mr. Justice Bankes, and Mr. Justice Avory, heard arguments arising upon the rule *nisi* that had been obtained by the United Dental Service, Ltd., directed to the Registrar of Joint-stock Companies, calling on him to show cause why a *mandamus* should not issue to compel him to register the name of the United Dental Service, Ltd. It is stated upon the application for the rule that the company was formed with the object of providing dental attendance for poor people, and the Registrar would not register the company with the word "dental" in the name. The Registrar had refused on the ground that the company had not provided in the memorandum that only registered dentists should do the work.

The Solicitor-General (Sir Stanley Buckmaster, K.C., M.P.) and Mr. Branson appeared for the Registrar to show cause against the rule, and Mr. Grant, K.C., supported it. After the Solicitor-General and Mr. Grant had addressed the Court, the Lord Chief Justice, in giving judgment, said that the question was whether the use of the words "United Dental Service, Ltd." amounted to an offence under the Dentists Act. In his opinion it did not. Under the older decisions it might be said that it would have amounted to an offence under the Act if the persons did not hold the diploma or degree necessary for registration, but having regard to what was said by the House of Lords in *Bellerby v. Heyworth*, and particularly in *Minter v. Snow*, he could not come to the conclusion that the employment of the words used in the present case could constitute an offence under the Act. In his opinion, the words "United Dental Service" were a description of the acts to be performed, and did not mean that the persons who would perform them were qualified under the Act. The Registrar would be justified, if the registration of the title of a company showed that an offence under the Act would be committed, in refusing to register the name; but as he (the Lord Chief Justice) had come to the conclusion that that was not the effect of the use of the words in the present case, he was of opinion that the decision of the Registrar was wrong. He did not think that the Registrar had a discretion to determine whether the name of the company, when coupled with the contents of the memorandum of association, was calculated to deceive the public. How would it be possible for him to come to that conclusion without hearing evidence? The Registrar might have a discretion to refuse to register a company if he came to the conclusion that a term in its name implied a criminal offence or if the name contained a scandalous or obscene word; but he could not think that it was open to him, without being able to hold a judicial inquiry, to come to the conclusion that a particular name was calculated to deceive. Upon the whole, he came to the conclusion that the case was one in which a prerogative writ of *mandamus* should be issued, and the rule would accordingly be made absolute.

Justices Bankes and Avory agreed, and the rule was made absolute.



## LIMITED COMPANIES.

### New Companies Registered.

P.C. means Private Company and R.O. Registered Office.

CHEMICO-ELECTRIC CO., LTD. (P.C.).—Capital 85,000l. R.O., 13 St. Helen's Place, London, E.C.

T. HOUGHTON, LTD. (P.C.).—Capital 2,000l. Objects: To take powers to carry on the business of dealers in perfumery and pharmaceutical preparations. R.O., 76b Oxford Street, London, W.

FORSTER & CO., LTD. (P.C.).—Capital 2,000l., in 1l. shares. Objects: To carry on the business of chemists, druggists, dentists, opticians, etc. H. J. Charlton and A. N. Conroy, 80 Nuns Road, Fenham, chemist's assistant.

### Company News.

A. & F. PEARS, LTD.—A meeting of the shareholders will shortly be held to consider a proposal for amalgamation with Messrs. Lever Brothers, Ltd. By the directors' scheme, it is stated, the present ordinary shareholders in A. & F. Pears, who have been receiving a 10-per-cent. ordinary dividend, will become holders of preferred ordinary stock yielding 12 per cent. The business will be carried on under the same name as hitherto.

PAINE & CO., LTD.—The report for the year to May 31 states that the accounts disclose a considerable increase in the net profits over any previous year. While the business in all the manufacturing departments has been fully maintained, the largely increased demand for the "John Bull" malt-products has necessitated yet further extensions of plant and buildings, and an additional channel for the supply of condenser-water has been constructed, and many other permanent improvements effected. The directors propose adding the sum of 2,250l. to reserve, making 5,000l., and to write off a further sum of 250l. from freehold properties; to pay an ordinary dividend of 10 per cent.; and to carry the balance forward.

## BANKRUPTCY REPORT.

**Re Charles Willmer**, 387 Katherine Road, East Ham; 8 Marlow Terrace, High Street South, East Ham; 51 Vicarage Lane, Stratford; and 47 Stratford Road, Plaistow, Drug-stores Proprietor.—The first meeting of creditors in this case was held at the London Bankruptcy Court on August 6. Mr. Egerton S. Grey, Official Receiver, reported that the debtor had stated that he owed 750l., and valued his assets at 14l. The failure was attributed to thefts by managers, bad trade, and interest charges. No offer was submitted by the debtor, and the case remained in the hands of the Official Receiver to be wound up in bankruptcy.

## DEED OF ARRANGEMENT.

**Peake, Wm. Alex.**, 49 High Street and 49 Fore Street, Hertford, Chemist and Druggist.—Trustee, G. M. White, 14 Old Jewry Chambers, London, E.C., C.A. Dated, July 24; filed, July 30. Liabilities unsecured, 434l.; estimated net assets, 232l. Among the creditors are the following: The British Drug Houses, Ltd. (17l.); W. J. Bush & Co., Ltd. (6l.); Sir Robert Burnett & Co., Ltd. (3l.); Barnett & Foster (4l.); Express Developing Co. (5l.); Hooper & Co. (3l.); London Optical Co. (3l.); S. Maw, Son & Sons (31l.); May, Roberts & Co., Ltd. (8l.); McGeson & Co., Ltd. (6l.); Price's Patent Candle Co., Ltd. (3l.); and Sanitas Co., Ltd. (3l.).

## GAZETTE.

### Partnerships Dissolved.

COCKER, R., COCKER, P., COCKER, F., COCKER W., COCKER, H., and COCKER, J., Darwen, brush-manufacturers, under the style of R. Cocker & Sons.

PERKINS, A. L., and MORGAN, El., Sketty, Glamorgan, physicians and surgeons, under the style of Perkins & Morgan.

### Bankruptcy Acts.

RECEIVING ORDER.

VILLAIN, P., Effra Road, Brixton, analytical chemist.

## BIRTHS.

Authenticated notices are inserted without charge.

JOHNSON.—At 38 Kirby Road, Leicester, on August 5, the wife of S. Howard Johnson, chemist and druggist, of a son.

REYNOLDS.—At 2 Broadway, West Worthing, on July 30, the wife of Harry Reynolds, chemist and druggist, of a son.

SMOLLET.—At Torre Pharmacy, Torquay, on July 31, the wife of Charles A. Smollet, chemist and druggist, of a daughter.

## MARRIAGES.

Authenticated notices are inserted without charge.

CLARKE—LOCKIER.—At St. John's Church, Walton, Liverpool, by the Rev. H. Le Bert, on August 1, Frederick Stanley Clarke, Ph.C. (Wellcome Chemical-works, Dartford), to Elsie May, only daughter of Mr. William Lockier, Orrell Park, Liverpool.

GRAY—ALEXANDER.—At Chattanooga, Banff, by the Rev. Mr. Mudie, assisted by the Rev. Mr. Rogerson, on July 29, Charles J. Gray, Stromness, to Jeanie Kennedy, youngest daughter of ex-Provost Alexander, chemist and druggist, Banff.

HANBURY—KEEN.—At St. Mary's, Harrow-on-the-Hill, on July 30, Herbert Wood, eldest son of Mr. J. J. Hanbury, J.P., of Edgely, Cricklewood, to Florence, eldest daughter of Mr. Nimrod Keen, chemist and druggist, Feltham, Middlesex.

HEYWOOD—COLTMAN.—At St. Hilda's Church, Halifax, on August 4, Sidney Heywood, chemist, son of Mr. Wm. Heywood, chemist and druggist, Bury, to Ellen, younger daughter of Mr. John W. Coltman, Halifax.

JONES—HUMPHREY.—At St. Margaret's Church, Swinton, by the Rev. C. Steel (vicar of the parish), on July 30, John Edmund Jones, chemist and druggist, Mexborough, son of Mr. John Jones, chemist and druggist, 38 Station Street, Swinton, to Florence Mary, daughter of Mr. and Mrs. H. Humphrey, Racecourse House, Swinton.

STACEY—GUNSON.—At Sardis Church, British Columbia, on July 8, by the Rev. T. E. Rowe, Vicar, Wilson, fourth son of Mr. Samuel Lloyd Stacey, J.P., of London, to Barbara, daughter of Mrs. E. R. Gunson, of West Tisted, Hampshire.

## DEATHS.

Authenticated notices are inserted without charge.

ASHTON.—At 49 Croftdown Road, Highgate Road, London, N., on July 28, Mr. Frederick William Ashton, Ph.C., of Messrs. Idris & Co.'s representative staff, aged fifty-three. Mr. Ashton died suddenly in the night from hæmorrhage of the left lung, which recurred after a twenty years' interval. He had been in his customary health except a slight cold, and called on his customers at Bedford on the Tuesday. The seizure occurred during the night. Mr. Ashton passed the Major examination in 1884, and subsequently was in business on his own account at Winchester and elsewhere. Seventeen years ago he joined Messrs. Idris & Co.'s staff, and became as highly respected on the road as he was by his employers. He took an active interest in pharmaceutical affairs in London, and was often seen at the social functions. Since he went to live in Highgate two years ago he identified himself with literary and social work there. He is survived by Mrs. Ashton and a grown-up daughter. The funeral took place at Highgate Cemetery on Friday, July 31, among the mourners being Mr. Bishop and Mr. William Idris.

BING.—At Dorset Lodge, Ethelbert Road, Canterbury, on August 3, Mr. Edwin Bing, Ph.C., aged

seventy-eight. Mr. Bing was the senior partner of E. Bing & Son, chemists, 41 St. George Street, Canterbury, who have a wide reputation for lavender-water and essence of violets, and who cultivate lavender locally.

**COLEMAN.**—At Cardiff, on August 2, Mr. Edward James Coleman, chemist and druggist, aged seventy. Mr. Coleman passed the Minor examination before the Pharmacy Act, 1868, was passed, and succeeded to his father's business in High Street, Cardiff, which he continued till he retired about fifteen years ago. He was active in the public work of the city, being a governor of the Infirmary and a member of the Cardiff Board of Guardians. Mr. Coleman was unmarried.

**NESSBIT.**—Mr. John Nesbit, Ph.C., 236 High Street, Portobello, Edinburgh, died on August 5, aged seventy-nine. Mr. Nesbit was a North of England man and passed the Major examination in 1862. Subsequently he opened a fine pharmacy in Portobello, which he conducted successfully for many years. He was an efficient pharmacist with a high regard for his craft, and for many years was a member of the Pharmaceutical Board of Examiners for Scotland, and also President of the North British branch of the Pharmaceutical Society in the days before its reorganisation. In both capacities he did well. His son, Mr. James Nesbit, became associated with him in business and greatly developed the aerated-water side of the business, latterly relieving his father of business cares entirely. Mr. Nesbit was a member of the Edinburgh Parish Council. He was a most likeable man and the last of the generation of Edinburgh pharmacists which included such men as James R. Young, John B. Stephenson, William Gilmore, and James Buchanan.

**SHACKERLEY.**—At North Street, Penzance, on August 1, Mr. Benjamin Shackerley, chemist and druggist, aged sixty-four.

**WATERHOUSE.**—At 7 The Terrace, Royal Naval Hospital, Haslar, on July 30, Kate Agnes, wife of Mr. Frederick H. Waterhouse, pharmacist.

## WILLS PROVEN.

**MR. CLAUDE VAN OPPEN,** of Van Oppen, Ross & Co., wholesale perfumers, 38 Basinghall Street, London, E.C., who died on July 13, aged forty-two, left estate of the gross value of 387*l.* 10*s.* 10*d.*

**MR. JEREMY BLENKIRON,** 47 Spottiswoode Street, Edinburgh, chemist and druggist, who died on July 23, left personal estate in the United Kingdom valued at 2,420*l.*, of which 1,399*l.* is in Scotland.

**MR. WALTER RUBERY,** 19 Lea Road, Wolverhampton, for thirty-four years representative of Messrs. Reade Bros., wholesale chemists, Wolverhampton, who died intestate and a widower on June 20, left estate of the gross value of 603*l.* 12*s.*, of which 489*l.* 12*s.* is net personality.

**MR. THOMAS FAWSETT,** 97 Philbeach Gardens, Earl's Court, London, S.W., and of 51 Great Marlborough Street, W., of Lemale & Co., manufacturers of teeth and dental materials, who died on May 18, aged ninety-one, left estate of the gross value of 18,686*l.* 7*s.* 6*d.*, of which 18,509*l.* 4*s.* 10*d.* is net personality.

## PERSONALITIES.

Authenticated information for this section will be received by the Editor, and published, if not in the nature of advertisement.

**MISS VERA KNOTT,** daughter of Mr. Herbert Knott, chemist and druggist, Bolton, has been awarded the Shepherd Cross Scholarship, tenable at the Bolton Church Institute.

At the annual meeting of the Provincial Grand Lodge of Hampshire and Isle of Wight Freemasons, Mr. J. H. Chantry, chemist and druggist, Totland Bay, was appointed a Steward.

**MR. R. T. SIMPSON,** chemist and druggist, has again been appointed Secretary of the Lancaster Rifle Association; **MR. A. E. LEA** (Messrs. Vince) has been appointed Treasurer, and **MR. J. VINCE,** chemist and druggist, Chcapside, a Vice-President.

## BUSINESS CHANGES.

Authenticated information for this section will be received by the Editor, and published, if not in the nature of advertisement.

**MR. JOHN SANDBROOK,** chemist and druggist, has purchased the business of the late Mr. Walter Wade, 55 High Street, Sidcup, Kent.

**MR. FRANK BLACKMORE,** Ph.C., 17 High Street, Weston-super-Mare, has purchased the business formerly carried on by Mr. Joseph Hicks, at 37 High Street.

**MR. JOHN D. SMART-DALGLEISH** has amalgamated his business with Messrs. Scotts, Ltd., chemists and druggists, Lot 45 Water Street, Georgetown, Demerara, of which company he has been appointed manager.

## WESTMINSTER WISDOM.

The Week in Parliament.

### SELECT COMMITTEE ON PATENT MEDICINES.

The Select Committee on Patent and Proprietary Medicines concluded its deliberations on Tuesday, Sir Henry Norman, M.P., again presiding. The consideration of the draft report of the Chairman, which had engaged the attention of the Committee for some days past, was concluded, and the report, which was forthwith laid on the table of the House of Commons in the form technically known as "in dummy," will, it is stated on authority, be issued at the end of the week. The Committee took the somewhat unusual course at the close of Tuesday's proceedings of tendering unanimously a hearty vote of thanks to the Chairman for the ability and care which he had displayed in the preparation of his report, and the conduct of the proceedings. Numerous amendments have been made—our Parliamentary correspondent learns upon high authority—in the report as originally drafted, especially in regard to its more controversial aspects, but the discussion has been conducted in a purely friendly and amicable spirit throughout. In all, the report of the Chairman covers about twenty-six pages. It contains, at the outset, a detailed summary of the laws relating to the control of patent and proprietary medicines in foreign countries, and this review, which is of an exhaustive character, also includes the practices observable in the British Dominions. A very careful analysis has been made of the existing laws in Great Britain, and in regard to this the report contains some strong observations. The report deals in detail with many of the scientific aspects of the matter, such as the limits of analysis and other matters of that kind. The report also contains a number of analyses, and an attempt is made at a division of what are known as secret remedies into various classes. The report also comprises a number of recommendations relating to the various matters referred to the Committee.

### THE USE OF COCAINE IN INDIA.

In the House of Commons on Tuesday, Mr. Charles Roberts stated, in reply to Sir J. D. Rees, that the use of cocaine for non-medical purposes has been on the increase in India, as in other countries, but the Secretary of State sees no reason to ascribe this to the opium policy of the Government of India, which continues, so far as internal consumption is concerned, to be one of Excise regulation, as in the past. He has seen a newspaper report of the case of Nzer Hussein Raja Hussein, who on July 8 was sentenced at Bombay to a year's rigorous imprisonment for illicit possession of opium.

**RADIUM IN AUSTRALIA.**—The Radium Extraction Co., of South Australia, has obtained a considerable supply of ore which, at the present price of radium, will pay to work.



## PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.

### Council-meeting.

THE monthly meeting of the Council was held at 16 Bloomsbury Square, London, W.C., on August 5, and was but a short one. Grants were made from the Benevolent Fund of 104*l.* to six applicants, and Mr. Rogers, the Chairman, commented on the healthy state of the Fund. Messrs. Neathercoat, T. A. White, Cross, Sargeant, and F. J. Gibson reported as delegates to the Chester Conference that the meeting was highly successful. Mr. E. M. Holmes's report on the Herbarium Competition was interesting, and as a result the silver medal was awarded to Mr. E. A. Price, Oxford, and the bronze medal to Miss E. H. Cook, Golder's Green. The President was appointed as representative of the Pharmaceutical Society on the Governing Body of the Chelsea Physic Garden. It was announced that Dr. Lauriston Shaw is to deliver the address at the opening of the next session of the School of Pharmacy. It was agreed to fall in with the suggestion of the Association's Executive Committee that a letter be sent to the National Health Insurance Commissioners asking them, in view of the political situation, to make provision to meet the difficulties likely to be occasioned by scarcity of drugs contained in the Tariff. The Chemists' Assistants' Association have received permission to hold their meetings on the Society's premises in the coming winter session. The President called attention to the fact that the links on the presidential chain have been completed by new links presented by the two immediate Past Presidents—Mr. Allen and Mr. Harrington.

THE councillors present were Mr. Edmund White (President), Mr. E. T. Neathercoat (Vice-President), Mr. W. H. Gibson (Treasurer), and Messrs. C. B. Allen, F. E. Bilson, A. S. Campkin, W. G. Cross, J. H. Cuff, W. L. Currie, F. J. Gibson, R. L. Gifford, J. F. Harrington, J. Harrison, L. M. Parry, F. A. Rogers, P. F. Rowsell, F. P. Sargeant, T. A. White, and J. R. Young.

### ELECTIONS AND RESTORATIONS.

The minutes of the previous meeting having been read and confirmed, the Council proceeded to elect sixty-five members and thirty-four student-associates. Fourteen members were restored to their former position in the Society and two persons had their names restored to the Register of Chemists and Druggists.

### FINANCE.

The Treasurer then presented the report of the Finance Committee, of which the following is an abstract: The receipts on the general fund amounted to 407*l.* 19*s.* 4*d.*, made up as follows: Penalties and costs, 69*l.* 2*s.*; subscriptions, 110*l.* 15*s.* 6*d.*; "Journal" and publications, 23*l.* 4*s.* 7*d.*; restoration-fees, etc., 9*l.* 5*s.*; registration-fees, 56*l.* 14*s.*; ground-rents, 68*l.* 0*s.* 5*d.*; rent, 55*l.* 18*s.* 8*d.*; bank interest, 14*l.* 19*s.* 2*d.*—making, with the sum carried forward, a balance in hand of 1,005*l.* 5*s.* 7*d.* From this the following amounts were recommended for payment: "Journal" and publications, 245*l.* 17*s.*; stationery, etc., 140*l.* 10*s.* 8*d.*; current expenses, 700*l.*; salaries, etc., 1,287*l.* 17*s.* 4*d.*; school and examinations, 352*l.* 13*s.* 9*d.*; law and professional charges, 145*l.* 18*s.* 4*d.*; house, 51*l.* 16*s.* 10*d.*; library, 11*l.* 2*s.* 11*d.*—a total of 2,935*l.* 16*s.* 10*d.* The balances on the Benevolent Fund were shown as follows: Current account, 792*l.* 11*s.* 5*d.*; donation account, 89*l.* 0*s.* 1*d.*; orphan fund, 29*l.* 19*s.* 8*d.*

The Treasurer, in moving the adoption of the report, said that the balance was 230*l.* in excess of what it was last year at the same time. The receipts were 480*l.* less, this being accounted for by the receipts from the

"Journal" being less. The registration-fees are 20 per cent. more than at the same period of last year. The amounts required for payment are less by 164*l.* The Benevolent Fund is in good condition, as the amount received from subscriptions is nearly double what it was in the same period last year.

The report was adopted.

### BENEVOLENT FUND.

The report of the Benevolent Fund Committee was next presented by Mr. ROGERS, the Chairman of the Committee. He commented on the healthy condition of the Fund, which he believed resulted from the appeal made last year. He said that, in view of the uncertain outlook, he refrained from making an appeal this year. The report recommended grants amounting to 104*l.* to six applicants. Three other cases were deferred for further consideration. The sum granted compares with 148*l.* 10*s.* 8*d.* voted at the August meeting last year.

The report was adopted.

### LIBRARY COMMITTEE.

The report of the Library, Museum, School, and House Committee was presented by the President. This stated that the Committee had agreed to give permission for Mr. Phillips to work in the Pharmaceutical Research Laboratory until the end of July. The question of appointments to the School of Pharmacy Staff was referred to, but deferred to a later stage in the Council-meeting. It was recommended that Mr. Edgar W. Rogers be nominated as Salters' Research Fellow for the ensuing session. Accounts for house repairs, amounting to 9*l.* 6*s.* 3*d.*, were passed for payment. The question of granting a new lease on property at Paddington Green was deferred, owing to the present state of affairs.

The report was adopted.

### REGISTERED APPRENTICES.

The REGISTRAR reported that since last meeting he has registered sixty-six apprentices or students.

### THE CHESTER CONFERENCE.

MR. NEATHERCOAT, on the invitation of the President, reported as a delegate on the British Pharmaceutical Conference at Chester. He said that from all points of view the Conference was a distinct success. The arrangements made by the Local Committee were excellent and complete. It was not an easy task to undertake after the jubilee meeting in London, but the Local Committee soon removed any doubt as to their ability to provide for the Conference. Mr. Shephard, Chairman, Mr. Hopley, Vice-Chairman, and Mr. Owen, Secretary of the Local Committee, worked like Trojans. General regret was expressed at the dinner on the Tuesday evening that the President and Mrs. White were not able to be present. "Chester had added another distinct success to the long list of successful Conferences," concluded Mr. Neathercoat.

MR. J. R. YOUNG explained why he was not able to attend, and Mr. T. A. WHITE, MR. CROSS, MR. SARGEANT, and Mr. F. J. GIBSON expressed satisfaction with the arrangements.

THE PRESIDENT said he was glad to hear the delegates' expressions of pleasure, and he was sure that the Chester pharmacists will be glad to know that their efforts were appreciated.

### THE HERBARIUM COMPETITION.

MR. E. M. HOLMES reported as follows on the three herbaria which were received for the Herbarium Competition:

The collection sent in by Mr. E. A. Price, of Oxford, complies perfectly with all the requirements as stated in the Calendar of the Society. It contains 150 species, belonging to fifty-six different natural orders, and 132 typical genera, and where there is more than one species representing a genus the species belong to different sections of the genus, indicating forethought and careful judgment on the part of the collector. Careful dissections of the flowers, with, in many cases, very accurate and excellent drawings of the structure of the flower, are given. A large proportion of the species are those that are used in medicine or as herbs, and only one species is incorrectly named, but in this case the distinguishing character is one that requires a knowledge of the species nearest to it to appreciate. The



capacity for taking infinite pains is so evident in this collection that, if a gold medal had been available, I should not hesitate to recommend its award.

The collection sent in by Mr. S. H. Atkins, of Cambridge, also contains 150 specimens, representing in this case fifty-one natural orders and 115 genera. The specimens are not so well dried and mounted, and contain a smaller proportion of medicinal plants and herbs, and include about fifteen species which are certainly not wild plants in Cambridgeshire, and could only have been found in gardens or as escapes from gardens. The collection indicates less forethought and judgment in selecting specimens than the first, and six of the specimens are wrongly named. No dissections or drawings or floral formulæ are given, but the roots in many cases have been left on the plants, so that sufficient pressure to make nice specimens has not been used, with the result that the leaves are not pressed flat, and the specimens present a lack of neatness. It is, of course, impossible to judge how much time the collector has had at his disposal, and it may have been for want of time that the specimens are not so well mounted as in the next collection.

The third collection, by Miss E. H. Cook, of Golder's Green, includes only ninety-one plants belonging to thirty-eight families and eighty-one genera, and although the number is less than the limit imposed by the Calendar, so much time and trouble has been spent on the collection that it certainly excels the last in many respects. The labels have been typed in different inks, the plants are beautifully dried and mounted almost like pictures; floral formulæ or dissections are given, and the colours of the flowers are well preserved. The genera are carefully selected, evidently with the view of representing divergent types as far as possible; and, proportionately to the number sent in, it is equal to the first in the adequate representation of the leading genera of each family.

I have, therefore, the pleasure of recommending that the Silver Medal be awarded to Mr. E. A. Price and the Bronze Medal to Miss E. H. Cook, and a Certificate to Mr. S. H. Atkins.

The Council accepted the report and made the awards recommended.

Mr. E. M. Holmes was thanked for his report.

#### THE RECENT EXAMINATIONS.

The report of the Examiners on the July examinations was received. It showed that in London of 24 Major candidates 17 passed, while of 213 candidates for the Minor 113 were successful. In Edinburgh none of the three Major candidates passed, but of 59 Minor candidates 36 passed.

Diplomas stamped with the seal of the Society were granted to the new pharmaceutical chemists.

#### CORRESPONDENCE.

The Colonial Office forwarded a copy of the Mauritius Regulations for the examination of candidates for registration as students or apprentices in pharmacy.

The Secretary in Scotland sent a report of the meeting of the Executive of the North British Branch, giving particulars of the election of the Chairman and Vice-Chairman.

The Institute of Chemistry thanked the Society for the use of a laboratory for the examination in organic chemistry.

The application was granted of the Bell Scholars of last session for admission to the advanced course in the Society's school.

The Editor of the Oxford Medical Publications asked permission to reprint formulæ from the "British Pharmaceutical Codex" in the "Practical Cyclopædia of Medical Treatment." This was granted.

The Pharmacy Board of Victoria sent a copy of the regulations regarding the qualification of pharmacists in the State.

A letter from Dr. Lauriston Shaw intimated his willingness to deliver the inaugural address at the opening of the session of the School of Pharmacy.

#### THE CHELSEA PHYSIC GARDEN.

The Secretary of the Chelsea Physic Garden intimated that the term of office of the Society's representative on the Board of Management has expired, and asked to be notified regarding a representative for the ensuing period of four years.

Mr. ALLEN, who at present represents the Society, said he ought to be allowed to retire. He was appointed at the time when he occupied the presidential chair, and he thought that the President should allow his name to go forward. There is very little labour connected with the appointment, as only two meetings are held in the course of the year, one at the gardens and the other in a lawyer's office.

Mr. ROWSELL formally proposed that Mr. White be appointed, and, the President having intimated his willingness to accept the office, he was elected.

#### CHEMISTS' ASSISTANTS' ASSOCIATION.

A request was received from the Chemists' Assistants' Association that the Society would grant the Association facilities for its meetings on the premises at Bloomsbury Square.

The PRESIDENT agreed that it is desirable to foster a spirit which looks upon the Society's premises as the home of pharmaceutical meetings. Subject to the meetings being conducted upon established principles, it was proposed to grant the application for one year.

This was agreed to, and

Mr. ROGERS, as a Past President of the Association, thanked the Council for the permission.

#### PARLIAMENTARY COMMITTEE.

The business before the Parliamentary and General Purposes Committee consisted of a report of the Associations Executive Committee, which met on the previous day.

In the course of the report the Secretary reported on the expenses incurred by him as Returning Officer in connection with the election of the Pharmaceutical Committees for England and Wales. He submitted details of the allocation of the cost, showing that it ranged from 7s. 2d. in the case of the smallest Committees where there had been no contest, to 4l. 5s. 4d. in the case of Committees of sixteen, where a contest had been inevitable. The Committee recommended that the statement of accounts be sent to the respective Pharmaceutical Committees, and that each be asked to reimburse the Society to the extent of the amount mentioned. The Committee took into consideration the decisions registered by the Local Associations Conference on July 15, and resolved:

(a) That in cases where confidential information respecting the proceedings of the Executive Committee appear to be necessary, such information shall be forwarded periodically to the Local Associations, but that, in the general course of events, the report of the proceedings of the Executive Committee be published monthly in the official journal.

(b) That the detail consideration of the Tariff and the recommendations from the Executive be deferred until after the report of the Departmental Committee on the Tariff set up by the National Health Insurance Commission.

The Executive Committee, however, went through the recommendations of the Conference *seriatim*, and agreed generally to those suggestions, with the exception of the proposed deletion of grey open-weave from p. 15, line 17, of the Tariff.

The President referred at the Committee meeting to the probable effect of the political position in Europe upon the price of certain drugs mentioned in the Tariff, and it was recommended that a letter be sent to the Commission pointing out these possibilities, and submitting that provision should be made to meet the difficulties likely to be occasioned. It was resolved that steps should be taken at an opportune time to press for more pharmaceutical representation on Insurance Committees. The Secretary reported in detail what had been done in the direction of providing for the Insurance areas in which the Drug Fund had been over-spent. He was able to report that in every area the procedure which Mr. Masterman pointed out as being incumbent upon the Pharmaceutical Committees was now in process of being carried out.

The PRESIDENT, in moving the adoption of the report, said that the price of some drugs supplied by chemists might go up to a fabulous point, and it had been thought wise to send the letter referred to.

The report was adopted.



## OTHER BUSINESS.

The PRESIDENT called attention to the fact that two fresh links have been added to his chain of office. These have been added by the two immediate Past Presidents, Mr. Allen and Mr. Harrington.

The PRESIDENT then referred to the momentous occurrences of the hour, and said he hoped to meet the Council again in the autumn if things are normal. In the meantime it is customary for the President and Secretary to deal with the pressing business. On this occasion the responsibilities of the office are heavy, and he asked that the Council would confirm the steps it might be necessary to take. It may not be possible to call an emergency meeting, as decisions may have to be come to very quickly.

The members signified their assent to the course indicated.

Mr. PARRY mentioned that he had brought 67l. 4s. from the City of Liverpool as a contribution to the Parliamentary Representation Fund.

## SCHOOL OF PHARMACY APPOINTMENTS.

The Council then went into committee to consider the recommendations of the School Committee. On resuming, it was resolved that the following appointments be made on the staff of the School of Pharmacy for the ensuing year: Professor of Pharmaceutics, Henry G. Greenish; Lecturer in Botany, Charles H. Warner; Assistant Lecturer and Senior Demonstrator in Chemistry, Walter R. Pratt; Demonstrator in Chemistry, John C. Jinks; Demonstrator in Chemistry, Charles E. Corfield; Demonstrator in Pharmaceutics, Charles T. Bishop.

This concluded the public business.

## Pharmaceutical Parliamentary Fund.

A meeting of the subscribers to the Pharmaceutical Parliamentary Fund was held on Wednesday afternoon at 17 Bloomsbury Square for the purpose of electing two direct representatives of subscribers on the Committee charged with the administration of the Fund. The President of the Society was in the chair. The Assistant Secretary reported that up to and including August 1 subscriptions had been received from 1,526 contributors, and the average amount worked out to over 18s. per head. A list of the wholesale houses from which contributions had been received was also read. It was moved by Mr. Rowsell that Mr. C. A. Hill (of The British Drug Houses) and Mr. A. Milne (Secretary to Boots, Ltd.) be appointed as the direct representatives of the subscribers, and this was agreed to unanimously. The full Parliamentary Fund Committee therefore consists of the following: The President, Vice-President, and Treasurer of the Pharmaceutical Society, Mr. C. B. Allen (London), Mr. C. A. Hill (London), Mr. A. Milne (Nottingham), Mr. P. F. Rowsell (Exeter), Mr. F. P. Sargeant (Leeds), and Mr. J. Rymer Young (Warrington). The meeting closed with a cordial vote of thanks to the President.

THE FIRST MEETING of the newly elected Council of the Manchester Pharmaceutical Association took place on August 5, the President (Mr. James Grier, M.Sc.) in the chair. The business of the meeting was the adoption and approval of a very comprehensive syllabus which had been drawn up for the winter session. A dinner is to take place on October 14, to which the Lord Mayor of Manchester and the President of the Pharmaceutical Society of Great Britain have accepted invitations. There are also to be two lectures, one in November by Mr. Shacklady (of Liverpool), and one in December by Mr. Swindells, a well-known pharmacist and authority on Old Manchester. A whist-drive will take place in January, and an address will be given by Mr. Woolcock (the Secretary of the Pharmaceutical Society) in February. "Trade Topics" is the subject for the March meeting, and the session closes in April 1915 with the annual meeting. The report of the delegates to the Associations' Conference in London was submitted and approved.

PHARMACY IN BELGIUM.—At present there are 1,969 pharmacies and 4,298 medical practitioners in Belgium for a population of 7,490,411. Of the doctors 1,090 also have a dispensary; while in 537 parishes without a pharmacy the medicines are supplied by 785 doctors who do their own dispensing; in 135 parishes, with an aggregate of 436 pharmacies and 305 doctors, medicines are supplied to the public by both.

## SCIENTIFIC PROGRESS.

Temperatures under this heading are on the Centigrade scale

**Bacteriology of Aerated Waters.**—Nishizaki and Aoyazi, in a communication to the Pharmaceutical Society of Japan, state that they have bacteriologically examined some aerated drinks at present in the Japan market, and found that the presence of carbonic acid under pressure is a great check on the development of microbes. The authors therefore urge the necessity for perfectly closing the bottles of these beverages, otherwise good brands when kept will be totally spoilt through the loss of carbonic-acid gas.

**New Test for Morphine.**—Dr. T. H. Oliver, medical registrar at the Manchester Royal Infirmary, describes in the "Medical Chronicle" a new reaction of morphine and its salts. If to a solution of morphine a few cubic centimetres of hydrogen peroxide and a little strong ammonia are added, and the mixture stirred with a piece of copper wire, the previously colourless solution assumes a deep port-wine tint, with a considerable evolution of gas. The test is said to detect 0.0002 gram of morphine; but in dealing with very small amounts it is necessary to add a few drops of potassium-cyanide solution to remove any blue colour (from the copper) which may otherwise mask the port-wine tint. It is important not to add the cyanide before the copper, as this may prevent the occurrence of the reaction. The reaction is also a very delicate one for copper, detecting 0.0001 gram easily. It will occur if monomethylamine ( $\text{NH}_2\text{CH}_3$ ) be substituted for ammonia, but not with dimethylamine, nor with caustic soda. Codeine and dionine (methyl and ethyl morphine respectively), which are indistinguishable from morphine by ordinary tests, do not give the reaction; apomorphine gives an orange colour. The following alkaloids give negative results: Strychnine, brucine, atropine, narcotine, heroin, cocaine, nicotine, cephaline, emetine, veratrine, physostigmine, pilocarpine, and conine. "The Lancet" has tried the test and obtained confirmatory results.

**Structural Formulæ.**—At the Royal Institution, Sir J. J. Thomson, referring to the stereo-chemical formulæ used by the disciples of Van 't Hoff, confessed he had been inclined to think that chemists were disposed to make excessive use of structural formulæ in denoting their compounds, and, though impressed by the utility of the device, he had suspected chemists of pushing it to extremes. He had examined these theoretic arrangements, and had been impelled to the belief that the theoretic linkages between the chemists' atoms in the molecule do actually represent the lines of force between atoms. If the atom is a mixture of negatively electrified corpuscles and of positive electricity, then it must produce in its neighbourhood a field of force. Even when the positive and negative electricity balance one another, the field of force is still in being, because these forces are distributed in different portions of the atom. They therefore extend, as it were, tentacles towards the atoms in their own molecule and towards the atoms in other molecules. Thus, he believes, arise the forces which exist between molecules, and which are represented by surface tension in liquids and cohesion in solids. Such physical phenomena are the results of forces between different molecules, whereas chemical valency and chemical affinity are the effects of forces acting between atoms in the same molecule. This is significant of the change in the attitude of the physicist to chemical theory.

**Japan's Essential Oils.**—We are becoming at last used to the idea of a modern Japan, and across the poetic legend we are beginning to see the modern reality, says a writer in "La Parfumerie Moderne." Already on scientific ground the Japanese have shown their capacity for work by discoveries of a certain importance, and in commerce they have made an innovation by practising "National Publicity." Collective publicity was already known in Europe and America. Japan, however, shows us a whole nation solidarised by a general action. In connection with aromatic products we have often had occasion to speak of the Empire of the Rising Sun, the home of camphor, menthol, kuromoji, and, quite recently, of the essence of hesperides. Is the orange-tree really a native of Asia, and do the Japanese trees represent the primitive *Citrus*? The fact is that the orange oils received from this region only resemble slightly the products to which we are accustomed. We have been able to examine a large number of essential oils which have come to Europe under the designation of oil of orange, citron oil, and mandarin oil. They are all colourless, contain only traces of aldehydes or oxygenised substances and a small proportion of resin and colouring-matter. They are oils distilled by steam



under ordinary pressure, and are practically composed exclusively of terpenes. Whatever be their denomination, these terpenes all show a density and an optical rotation which bring them near to oil of bitter orange, with, however, a particular taste, a characteristic Japanese taste; sp. gr. at 15°, 0.8517; optical rotation, +91° 7'. Worked up and redistilled with Spanish oils, the orange oils of Japan give some rather agreeable essences at a reasonable price. The so-called "citron essence of Japan" is probably an oil distilled from the same fruits, but green. The mandarin essence has a better flavour, and is suitable for confectionery. The Japanese firms should adopt new methods of extraction, using distilling apparatus at a reduced pressure, or extraction by volatile solvents.

## Postcard Competition.

WE offered in the Summer Number copies of the new edition of "Pharmaceutical Formulas" for the best answers to a set of questions regarding the papers communicated to the British Pharmaceutical Conference (see (C. & D., July 25, p. 110). There has been a fair response, the subject having proved to be interesting. The voting resulted as follows:

### 1. Most useful paper—

"Uniformity in the Dispensing of Abnormal Prescriptions," by E. Saville Peck, M.A., Ph.C.

### 2. Most informative paper—

"The Mineral Constituents of Certain Tinctures and Drugs," by S. Judd Lewis, D.Sc., Ph.C.

### 3. Most profitable paper—

"Business Science in Pharmacy," by T. O. Barlow, Ph.C.

The replies to the questions left no doubt as to the opinions of our readers, but it is interesting to give the titles of the other papers which received votes in connection with the three questions. These were:

"The Composition of the Glycerophosphates of Commerce," by J. C. Umney, F.C.S., and C. T. Bennett, B.Sc., F.I.C.

"The Determination of Iron in the Presence of Phosphoric Acid," by C. E. Corfield, Ph.C., and W. R. Pratt, B.Sc., Ph.C.

"The Incompatibility of Strychnine and Nux Vomica with Alkalies, Iodides, and Bromides," by H. Finnmöre and E. Williamson.

"The Rate of Dialysis of Alkaloids in Aqueous Solution and in the Form of Galenicals," by H. Finnmöre, B.Sc., F.I.C.

"Anæsthetic Ether of Commerce," by H. Finnmöre, B.Sc., F.I.C.

"Liquor Opii Sedativus," by R. R. Bennett, B.Sc., F.I.C., and T. Tusting Cocking.

"Some Uses of a Tincture-press," by E. W. Pollard, B.Sc., Ph.C.

"Adulteration of Belladonna-leaves," by G. Stafford Allen and Harold Deane, B.Sc., F.I.C.

"The Administration of Ext. Filicis Maris Liq.," by F. W. Crossley-Holland, F.C.S.

"The Legal Obligations of Dispensers," by H. Wippell Gadd, F.C.S., B.L.

This leaves seven papers which were not mentioned by any of the competitors. The result shows that the proceedings of the Conference as a whole meet with the approval of the majority, but it emphasises the fact that the papers read before the Practice Section are the most popular.

The following are the four competitors whose postcards, containing the correct answers, reached us first:

Dr. A. J. BARNES, 1 Charlemont Street, Dublin.

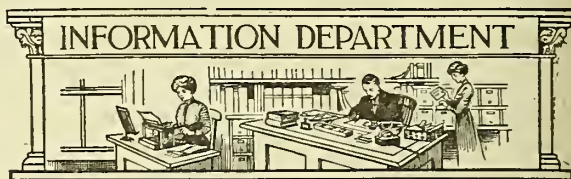
Mr. J. J. LOUGHRAN, c/o Black & Co., St. James's Street, Brighton.

Mr. S. B. SCAIFE, c/o Mr. J. Watt, Southminster.

Mr. R. WHITFIELD, 15 Hutton Street, Hetton Downs, co. Durham.

To each of these we award a copy of the new edition of "Pharmaceutical Formulas."

MARACAIBO COPAIBA.—The exports from Maracaibo, Venezuela, during 1913 amounted to 90 metric tons, valued at 8,900l.



Postal Address:

C. & D. INFORMATION DEPARTMENT, 42 Cannon Street, London, E.C.

Telegraphic Address: "CHEMICUS CANNON LONDON" (two words).

Telephone Number: BANK 852 (two lines).

## INFORMATION WANTED.

Postal or telephone information as to the names and addresses of the agents for or makers of the undermentioned articles is solicited. Please address as above.

- |   |  |
|---|--|
| 33/10. "Pine Tree" brand petroleum emulsion with hypophosphites.    | 51/72. "Apollo" toilet-rolls.                                |
| 49/72. Sister Lane's medical pillows.                               | 51/720. Makers of willow boxes (oval).                       |
| 49/69. "Chytoderine."   | 52/50. "Malto - Casein": makers.                             |
| 52/49. "Red, White and Blue" toilet-paper (crossed flags on label). | 52/55. "Gaulin" emulsifying machine.                         |
| 198/22. "Anti-Scurf Pomade, G. B., London."                         | 50/9. Laybourn's "Cuti" skin-cure.                           |
| 49/73. Monamido-Phenyldiamine: supply.                              | 53/71. Moving mechanical figures for window-display: makers. |
| 52/51. Paraphenazone citrate.                                       | 53/59. "Safronella" ointment.                                |
| 52/54. "Oxyline": supply.   |  |

## INFORMATION SUPPLIED.

Inquiries in regard to the following articles have been answered. The information will be given to others who send a stamped and addressed envelope for it to the above address.

- |  |  |
|--|--|
| Ampoule files, 47/26                       | Kaufmann's sulphur bitters, 51/901                 |
| Anæsthol, 44/66                            | "Khovah" health salts, 49/68                       |
| Anti-Venene (Calmette), 51/71              | Laxaline, 44/62                                    |
| Artificial limbs, 42/59                    | Laxatin tablets, 44/18                             |
| Barkola compound, 48/49                    | Liquid-soap dispensers, 44/64                      |
| Binn's special nit-combs, 40/41            | Little's Oriental balm, 49/71                      |
| Blood-testing pipettes, 47/73              | Luetin serum, 44/68                                |
| Boranieubeeren, 40/30                      | "Magic" polish, 41/73                              |
| Bromosal, 51/65                            | Manicure instruments, 41/31                        |
| Cadmum, 47/24                              | "Novio," toilet-paper, 37/55                       |
| Caxine, 49/12                              | "Omum Carpoor," 49/28                              |
| Cinnaform tablets, 41/550                  | Orlex, 41/540                                      |
| Clarke's blood-mixture, 43/41              | "Own Name" goods (for Straits Settlements), 44/200 |
| Clayton's "Carbolitas," 47/22              | Palerium, 49/120                                   |
| Cremogen, 46/74                            | "Pinomed" handkerchiefs, 43/45                     |
| "Crolas" castor oil, 46/741                | "Polita" polish, 47/39                             |
| Dalmatian insect-flowers, 46/22            | Potash permanganate (ton lots), 51/74              |
| "Dasco" plate-powder, 44/18                | Reducine, 46/17                                    |
| Davies's triple-spring arch-support, 190/8 | Respirators for white-lead works, 40/31            |
| Davol Rubber Co.'s agents, 50/71           | Richardson's liquid extracts, 52/56                |
| Draper's liq. iodi decolorat., 51/61       | Robertson's Bland's capsules, 42/51                |
| "Duchess" wrinkle straps, 52/49            | Sainsbury's lavender-water, 40/40                  |
| Equinoit, 52/54                            | Septonal, 50/9                                     |
| "Eucrasy," 36/7                            | Severyn Amuroff's "Mixture Universelle," 35/32     |
| Fatoff, 43/44                              | Silmerine, 46/740                                  |
| Fowler's night-lights, 46/17               | Spatulas, metal, 52/36                             |
| Genoform, 45/66                            | Thymol (makers), 45/65                             |
| Gowland's lotion, 44/65                    | Tin perchloride, 45/59                             |
| Hardy's "Anti-Midge," 13/31                | "Truft" adjustable arch-lifts, 52/490              |
| Heine's agents, 45/16                      | Tylmarin, 43/46                                    |
| Ink-erasing pencil, 50/7                   | Tyramine, 39/31                                    |
| Iodhyrine, 48/490                          | Webster's ink-powders (for Penang), 44/2           |
| Ivory soap, 51/900                         | Window dresser, 49/57                              |
| Jones's "Rheumaticuro," 37/54              | Wine of Cardui, 46/23 and 51/9                     |
| "June Roses" perfume, 50/8                 | Xylose, 43/46                                      |
| "Kappon" hair-wash, 47/23                  |  |



## OBSERVATIONS AND REFLECTIONS.

By Xrayser II.

Dr. McWalter, of Dublin,

sometimes hits the nail straight on the head, and his note in your correspondence columns states what is such an obvious truth that one is surprised to think that it never occurred to any of us before. That Conference which makes so much of its overseas membership should neglect to honour their Societies is surely surprising, especially when every year representatives attend its meetings from all parts of the world. I hope that we shall lay the lesson to heart, and that in future years arrangements will be made for a wider toast, and for replies from all the Societies who happen to be represented.

The Patent-medicine Committee's Report,

if we may judge from your note on the subject, is not going to be the colourless production that many people have been expecting, but there is some difficulty in forecasting what is in sight. I cannot believe that it will ever be made a penal licence for anyone to recommend publicly any remedy for the cure of human ills, but it may well happen that the one will be drawn much more tightly, and that thousands of preparations which have been sailing as close to the wind as possible in the past will be brought in for stamp-duty. I for one shall not be surprised if an attempt is made to bring in entire drugs as dutiable, along with the whole crowd of "known, admitted, and approved" remedies. This will, I venture to think, not be carried, or there will be thousands of interested parties who will fight against any such proposal to the death. But don't let us make the mistake of thinking that Parliament will believe that what in the case of the pharmacist is a public duty becomes a crime when it is done by the drug-store next door. So far as the poisons question is concerned we are all agreed, but outside the Pharmacy Acts there are other fields where competition is possible and desirable, and where there is no evasion by attempting to sell without a patent-medicine licence. I should not be surprised if an attempt is made to level-up or level-down the conditions under which many recommended and proprietary articles are sold.

In Matters of Public Interest,"

said Mr. Justice Shearman, in summing up on the "Consumption-cure" case, "everybody is at liberty to express himself in honest criticism," but neither judge nor juryman can decide infallibly what is honest and what is not. "Fair comment" (this phrase was used by the Judge earlier in the case, apparently as being equivalent to honest criticism) is a somewhat different matter; it is an external act, and may be judged by external evidence, whereas honesty is essentially internal. Criticism may be honest and yet not fair, for honesty may coexist with ignorance, with stupidity, with prejudice, and with a dozen other things which may bias or even blind the judgment. I suppose the criticism of all the "Secret Remedies" in the publication so named to be honest, but many of them have been shown to be erroneous in the account they give of the composition and quality of the medicines criticised, and this surely, however honestly meant, is not "fair comment"; it is not fair to condemn a thing on insufficient evidence, or to deliver judgment *ex cathedra* where there is room for mistake. Possibly it is not even honest, but this is too nice a point for me. I am, of course, expressing no opinion of the case referred to.

The Still-room,

which "The Times" appears anxious to revive, was formerly a feature of all great houses, and though it came to mean no more than the housekeeper's room, it was originally a stillatory, in which cordial and perfumed waters—among other things—were commonly made. I have many old domestic recipes for lavender-water and other perfumes closely resembling the one

given in "The Times," but I do not think any of them would produce a water equal to what is now supplied by the chemist. The process is always one of distillation, it may be in brandy, or rum, or white wine, or simple spirit, or spirit and rose-water; and when redistillation is ordered the old flowers are to be thrown away and fresh ones used in the proportion of two pounds to every pint of the first distillate. This, however, refers to lavender-water only. I do not remember to have ever seen an eighteenth-century recipe for Eau de Cologne, but I may have done so. I believe the popularity of this perfume was greatly increased by the fact that it was a favourite with the first Napoleon. Be this as it may, it was extensively made in England early in the nineteenth century, and Rennie gives several recipes for it. These are more like your own than the one, so "jealously guarded," used at Selfridge's. The older published recipes are, as a rule, more aromatic than is now usual; several that I have seen contain cardamom-seeds, others have cinnamon or coriander, or *eau de melisse des Carmes* (which contained these spices in addition to marjoram). Dr. A. B. Granville's was one of the most esteemed and professed to be "pure Eau de Cologne"; it has cinnamon and simple spirit of balm. The head of Selfridge's perfumery department, by the way, is wrong in regarding *huile de petit grain* as oil of orange-leaves; it is true the oil is now obtained from the leaves and shoots, but if his recipe is as old as he thinks it the old and true *huile de petit grain*, from unripe oranges, would certainly be used in it.

The History of Liquorice,

like that of many drugs, is obscure, and I am not prepared to throw any new light upon it. Your recent quotation from the Messrs. Wigram's fascinating book, "The Cradle of Mankind," reminds me, however, of a curious fact, which possibly someone else may be able to explain. Liquorice is still sent into Europe, it seems, from the site of ancient Nineveh, or near it, and in olden time our supply appears to have come exclusively from the East, although the plant is said to be indigenous to the South of Europe. How is it that we have no record of its cultivation there before the thirteenth century? Pliny knew it as *Scythia herba*, and follows Dioscorides in giving Pontus and Cappadocia as its natural habitat, while our own Gerard says "it is named *Scythice* of the country *Scythia*, where it groweth." This name probably refers especially to the neighbourhood of the Volga, where the Duke of Holstein's ambassadors found it growing profusely. Tournefort, in his account of his voyage into the Levant, notes its abundance along the course of the Araxes (Aras), where, he says, it is in all respects like the common sort, except that the husks and cods are longer and full of prickles, which accords with Hanbury and Flueckiger's opinion that the liquorice of Dioscorides is *G. echinata*. In view of the fact that the Wigrams say it is now the most important of all the commodities dealt in at Aleppo, it is strange that, as they note, it is not mentioned by Verney, and that I cannot find any allusion to it in Rauwolf, who devotes a whole chapter to the trade of Aleppo in drugs and other articles, and another to the plants he found in the neighbourhood. Nor does it occur in Ray's list of Eastern medicinal and other plants appended to the English translation of Rauwolf. It is curious, again, that Italian liquorice should be known as Spanish juice. What Tournefort calls the "common sort" was familiarly known as German liquorice. It does not appear to have been cultivated to any great extent in England in Lyte's time. He says it is found "in the gardens of some herboristes." Gerard, however, tells us that the "poore people" of the North "manure it with great diligence." In France the liquorice-root of Saragossa was most esteemed.



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## Editorial Articles.

### The War.

"In the presence of so great a calamity as the war which now so unhappily rages on the European Continent, it is difficult to write of commercial movements in an ordinary commercial spirit. In nearly every department of business commotion and disarrangement has occurred in consequence of the war, and although it seems at first sight hard that other lands should be compelled to suffer for quarrels in which they have taken no part, yet it only requires a moment's thought of the tremendous devastation inflicted on the nations actually engaged to remove from our minds any such selfish considerations. To calculate whether, on the whole, this country will be benefited or injured by the war now in progress is neither our province nor our wish. It would be mean, as well as useless, to complain of the one event, and it would be horrible to gloat over the other."

THE above is an extract from THE CHEMIST AND DRUGGIST Trade Report of August 15, 1870, when the Franco-Prussian War broke out. Similar conditions exist this week. The delicate fabric of international credit and currency has been rent apart, yet in Great Britain and Ireland there is no financial panic, because of the wise precautions to protect the gold reserves taken by the Government, who extended the August Bank Holiday to the joint-stock banks by three days to Friday, August 7, when it is anticipated that commercial men will be able to take better stock of their position and



carry out routine work. As it is, everyone is looking to his outstanding liabilities, reckoning up his own position and the position of his debtors. So far as the produce markets are concerned, merchants devote their attention at present to obtaining documents and shipping papers for goods already afloat and ascertaining the whereabouts of various cargoes. The postponement of bill payments by the issue of a partial Moratorium and the suspension of the Bank Charter Act have helped to assist the commercial community, and will no doubt adjust the machinery of credit to the entirely altered circumstances.

As regards Mincing Lane produce, in ordinary circumstances at this time of the year the markets are very dull. For several months past speculation in produce had been at a very low ebb owing to the Ulster problem and the foreign political outlook, and the tendency has been to liquidate. For some time to come future business in first hands must be largely on a cash basis—i.e., payment by cheque on the joint-stock banks—and there will be no buying or selling of bills of exchange. Home trade, however, will go on much as usual, subject to restricted stocks of some articles; but as to that, doubtless there will be much "give and take." Many articles have now a nominal value, and most auctions of produce will be suspended for the present, as several markets are closed. In the wholesale drug-trade several articles in daily demand have considerably appreciated in value, these including cream of tartar, citric acid, tartaric acid, glycerin, and bromides. It stands to reason that retail pharmacy, in so far as it is concerned with the prevention and alleviation of disease, will go on steadily. A certain measure of unusual caution and foresight will be exercised both in buying and selling; while the spirit of mutual good will and trust which has appeared in the highest quarters will spread through all ranks. It is most satisfactory to note that those concerned with the getting of medical supplies and distributing them to retailers (whom we may regard as consumers) have at short notice gripped the situation well, although they have acted independently. It is hoped that disregard for immediate gain may be one of the good things recorded in the history of this crisis.

It goes without saying that conservation of stocks by retail pharmacists is requisite from the outset. The Pharmaceutical Council has taken the initiative to impress this upon Pharmaceutical Committees, which is wise. Fortunately the wholesale drug-trade of this country is well informed and well organised, and retailers may rely upon having the assistance of their wholesalers in this matter of economising stocks existing in the British markets. A few staples have been obtained solely from the European Continent, as also have many chemicals, such as sodium salicylate and synthetics, which can be manufactured here, and no doubt will be. In emergencies British manufacturers do things which under normal conditions they do not attempt, and practical proof of this will be forthcoming ere long. We have the opportunity of demonstrating our resources and making the most of them. It was in such conditions as the present that the Leblanc alkali process was invented in France and for France, but that purpose was small compared with the service that the invention has been to all mankind.

The time is eminently one when the plain duty of every man and woman is to do their best in their spheres of work, meeting changes of circumstances and conditions with a spirit of forbearance and determination to do what lies in their power as individuals to surmount difficulties rather than to be crushed by them.

## The Patent-medicine Report.

### Recommendations Outlined and Considered.

It was on April 25, 1912, that the House of Commons appointed a Select Committee to consider and inquire into the question of the sale of patent and proprietary medicines and medical preparations and appliances, and advertisements relating thereto, and to report what amendments, if any, of the law are necessary or desirable. At the first meeting of the Committee on May 2, 1912, Sir Henry Norman was elected Chairman, and the first witness called, on May 9, was Sir Nathaniel Highmore, the eminent authority on stamp law, and at that time Solicitor to the Customs and Excise. The Committee continued to call witnesses representing all interests, and examined them thoroughly from all points of view, until the last, Dr. W. K. Norris, Chief Medical Officer in London to the Commonwealth of Australia, was heard on June 12, 1913. Thus far the Committee had held several private meetings and thirty-three in public. It was not in compliment to *THE CHEMIST AND DRUGGIST* that exactly 42 witnesses were called. The evidence was reported well in *THE CHEMIST AND DRUGGIST* as it was given. The regulations of parliamentary procedure required the re-appointment of the Committee in each new Session, the last occasion being on June 10 of this year. Sir Henry Norman had then been engaged on and off for a year in drafting a report for the Committee to consider, but the Government had set him other tasks to do, particularly an inquiry regarding wireless telegraphy. The consequent delay induced hope in some quarters that no more would be heard of the Patent-medicine Committee, but on Tuesday evening of this week the Committee's report was placed on the Table of the House of Commons. From what has been reported about it in *THE CHEMIST AND DRUGGIST* it will have been gathered that the Committee have dealt consistently with the reference to them by the House of Commons. The evidence given by representatives of the Government Departments revealed the fact that all of them disclaimed anything more than adventitious responsibility for the patent-medicine business, or for dealing with features thereof which all decent persons consider to be objectionable. The Committee would establish Government responsibility in these matters henceforth by the appointment of a responsible officer of the Local Government Board to take charge of it, but preferably an officer of a Ministry of Health if such be set up; in fact, adopting the Australian plan. No doubt this would materialise into a Secret or Patent-medicine Department, for the Committee also adopt the Canadian method of dealing with such remedies at their source by suggesting their registration along with full particulars as to their origin and composition, with the alcoholic strength in certain circumstances. The suggestion that the formula should be put on the label of the medicine is not adopted, however, and the Committee recognise that precautions should be taken to ensure that formulæ, if submitted, should be kept secret by the Department. Certain other precautions to preserve the rights of manufacturers, as well as to protect the public from fraud, are suggested, including a sort of censorship of advertisements. The legal evidence in regard to the Medicine Stamp Acts is reflected in a recommendation that these should be consolidated and amended, particularly that the exemption from stamp-duty enjoyed by entire drugs, sold under any other name than their own, should cease, as well as the exemption secured for Lamplough's saline and similar effervescent, and it is suggested that body-names of medicines should be



treated the same as ailment-names. The Committee would also abolish appropriated medicine-stamps, and would stop references "without which none is genuine." During the inquiry weighty evidence was given, especially by medical practitioners, as to remedies which are advertised for human ailments that the profession regard as incurable medicinally, such as Bright's disease, cancer, consumption, deafness, diabetes, epilepsy and fits, locomotor ataxy, paralysis, and rupture. The Committee share that view, and would prohibit the advertising and sale of such medicines, also the advertising of abortifacients and venereal remedies. Another recommendation is that in the case of medicated wines and certain spirituous preparations the American, Australian, and Canadian plan of stating the percentage of alcohol present should be adopted. Some suggestions are put forward in regard to trade-marks and trade descriptions, with a view to modifying existing law; in the former case this is for the purpose of limiting the period of exclusive use, and in the latter of securing easier conviction in cases where a trade description is false or misleading in any particular. It should be understood that at least one new Act of Parliament will be necessary to give effect to the Committee's recommendations. The times are not propitious for legislation, but we believe that the Chairman of the Committee and several of his colleagues will not allow the subject to drop as long as they are in Parliament. Therefore we suggest that when all who are directly interested in the patent-medicine business consider the report in detail, they should treat the matter from the point of view of practical politics, and steps might be taken to get into touch, when the time comes, with those who will draft a Bill to give effect to the Committee's report.

## Dental Legislation.

WE referred recently (*C. & D.*, June 13, p. 48) to the increased activity in regard to proposals for dental legislation. Further evidence of the interest in this question has since been brought forward. "The Times," for example, states that one of the last acts of the Council of the British Association before the members sailed for Australia for the annual meeting was to take in hand the question of the administration of anæsthetics by unregistered persons and the need of protecting the public against unnecessary risks. It is stated that attention is to be focussed on the protection of the public "from the administration of anæsthetics by unqualified persons," and it is also stated that the Home Office and the Privy Council are being approached by a small committee of the Association. It appears, further, that what the Committee has in view is to prevent in tooth-extraction the hypodermic administration of cocaine by unregistered persons. This is a serious question from the public point of view, having regard to the scarcity of registered dentists. It means, in effect that unless a person is able to afford to visit a registered man he cannot have the advantages of local anæsthesia, but must put up with all the pain of extraction. This view has evidently occurred to the Committee, as it is suggested that public dental service may be organised for poor persons on the line of a service at Reading; but nothing is said about the scarcity of registered dentists unless in connection with another aspect of the question in which it is remarked that "the great majority of the 5,000 registered dentists at present in practice are so prosperous that they care little one way or the other for more work." This seems to show that in their prosperity registered dentists will not

be able to find much time for dental service for poor persons. If there is to be any public service it had better come as "Dental Benefit" under the National Insurance Act, when the public will be able to control in some degree the choice of the dental operator; moreover, as insured persons there will be no question of receiving charitable assistance. Another contribution to the problem of dental legislation is a discussion of the subject in the "British Medical Journal," by Dr. Wm. Wallace, L.D.S., lecturer in the Glasgow Dental School. Dr. Wallace points out that "the Dentists Act was in a sense the product and expression of the dental snobbery and ignorance of the third quarter of last century. These lower sentiments, the lack of a rational knowledge of dental pathology, and a lax and scrambling dental curriculum lie at the root of the present dental troubles rather than defective legislation." He states that there should be an annual increment to the "Register" of 1,500 names, but since the passing of the Dentists Act the average annual increment has been *nil*. Special measures should be adopted, he holds, both to attract more recruits and by some means to reduce the numbers of the unregistered and make unregistered practice less attractive. Dr. Wallace suggests that the licensing bodies should be vested with powers to modify their curricula and, if they see fit, to admit unregistered practitioners to examinations *sine curriculo* or after a modified course of classes. The interesting point is that the problem is attracting attention in a broad-minded spirit, and we do not think that in any future draft Bill special pains will be taken to exclude practising pharmacists from the operations of any clause modifying the conditions of entrance to examinations.

The foregoing was prepared for insertion last week. Since then a report has been issued of a Committee, consisting of Mr. Charles Trevelyan, M.P. (Chairman), Mr. H. A. Powell, Sir George Newman, M.D., and Mr. E. B. Phipps, appointed by the President of the Board of Education to consider and report as to what alterations, if any, are needed in the present practice of the Board with regard to the acceptance of certificates from unregistered practitioners in dentistry as to the condition of the teeth of candidates for recognition as teachers by the Board. The inquiry arose from a complaint made by the Incorporated Dental Society, Ltd., as to the injustice which its members suffer from the non-recognition of their services and certificates by the Board. The Committee held four meetings and examined witnesses on behalf of the Incorporated Society, the British Dental Association, and the General Medical Council. After hearing them the Committee came to the conclusion that the balance of argument was decidedly against making the concessions which the Incorporated Dental Society demanded, particularly as if their claim were admitted it would be almost impossible for the Board to resist a similar demand from any other association of unregistered practitioners in dentistry. Moreover, considering the intentions of Parliament in passing the Dentists Act, 1878, it would very ill become the Board of Education to adopt a lower standard of general or special education than the minimum prescribed by the State. It is also pointed out that there is nothing to hinder teachers who are treated by unqualified dental practitioners from getting certificates from medical officers to the effect that their mouths are in good condition. Dealing with the general position of the dental profession, the Committee mention that in 1899 the number of registered dentists was 4,966, of whom 1,749 were dentists with dental or medical qualifications or both, and this latter class has been steadily increasing, so that in 1914 the number of registered dentists with such qualifications was 3,629 out of a total of 5,264, the remaining 1,635 being dentists registered as in practice at the passing of the Act. Therefore there is a distinct improvement, but while not



According to the Incorporated Society's request the Committee make the following significant statement:

"In addition to the registered dentists, there are the members of the Incorporated Dental Society, who number about 2,000. The President of the Society estimated that outside his Society there are about 6,000 persons, including dental chemists, dental herbalists, and others, who practise dentistry, besides dental assistants and apprentices, who may number a further 5,000. The Committee have no statistics as to the dental condition of the adult population of the country, but in view of the figures available as to the prevalence of dental decay among elementary school children, at least half of whom have been shown by medical inspection to be in need of dental treatment, and in view of the increasing importance now attached to teeth as a factor in the general problem of hygiene, it is probable that even the whole aggregate of qualified and unqualified persons concerned in dental practice is insufficient for the needs of a population of thirty-nine millions. If the State system of Health Insurance were extended to include dental benefit, the question of the supply of qualified dentists would at once become acute; already appointments of registered dentists to public dental services are being made in considerable numbers. The question only directly concerns the Board of Education in so far as it is likely to check the extension of School Dental Clinics; a consideration of the remedies lies outside the Board's functions. The Committee, however, feel justified in saying that the present state of the dental profession is such as to render it extremely inadvisable for the Board of Education to adopt any action which could be regarded as prejudicing the careful consideration by the State of the whole problem."

### Medical Service in India.

AN interesting White Paper has been issued this week which deals with "Correspondence Regarding the Indian Medical Service and the Medical Profession in India." The matter has been going on for a long time, having been started by Lord George Hamilton when Secretary of State for India in May 1899, the object being to afford to the people of India Western methods of medical treatment. It was at one time thought that the Indian Medical Service might give this treatment, but the present correspondence shows that this is not possible without incurring great expense, and, broadly speaking, what is now recommended is that the civilian medical profession of India should be strengthened by increasing the facilities for medical education and qualification. It is shown that the bulk of the people of India use indigenous methods of treatment and practitioners who carry such methods out, but that there is a growing tendency to consult allopathic medical practitioners.

### Chinese Opium.

UNDER the somewhat misleading title of "Chinese Trade in Drugs" "The Times" published recently an article from its Shanghai correspondent dealing with the suppression of opium and the increased smuggling of morphine. After enumerating various causes responsible for the present trade depression in China, the correspondent made the startling assertion that "the fundamental cause may well be the suppression of opium cultivation," this statement being based on the grounds that opium was the natural currency of the Chinese farmer, his margin of wealth out of which he paid for foreign luxuries, such as piece goods, and now he is no longer allowed to grow it. In a word (says "The Times" correspondent) the suppression of native opium has disorganised the whole economic machinery of China. The quicker, therefore, that China adapts herself to the new economic conditions the better. The attention of enthusiastic reformers like Mr. Theodore Tylor, M.P., might, however, be called to the fact that by suppressing the opium-traffic a greater and more insidious evil has quickly taken its place—i.e., the alarming growth in morphine and cocaine smuggling. Opium-smuggling, too, is being practised on a large scale, and without entering into details we may say is being done in a regular and open manner.

## The Cus-Cus Oil of India.

By Puran Singh, F.C.S.

THE roots of the *Cus-Cus* or *Khas Khas* grass (*Andropogon muricatus*, Retz) are the source of the vetivert oil of commerce. It is a marsh-plant growing wild in India, Ceylon, and the Philippine Islands. It has been introduced into Reunion, Java, Fiji, Seychelles, and Jamaica. Large quantities of the roots are exported from India and Java to Europe, where the oil is distilled. The leaves of the grass are odourless, and it is only the roots which are employed for distillation. Eric Drabble\* says that the oil occurs principally in resinous material lying in a layer of cells just internal to the endodermis, and also in the parenchymatous cells forming the septa of the cortex, and that in many vessels, and in broken-down groups of cells, it occurs as a yellowish-brown mass, which, when treated with alkalies, resolves itself into drops of an oily resinous substance.

The oil is steam-distilled from roots which are first macerated in water. The fractions of the oil which distil first, being more volatile and lighter than those which come over towards the end of the distillation, are called "light oil," and the latter "heavy oil." According to Parry,† these "light" and "heavy" oils can be separated by using a steam-jacketed still, with steam at a pressure of about 10 lb., until no more oil comes over. The "heavy" oil is then obtained by passing steam at a higher pressure direct into the retort. Mr. Parry remarks that the oil distilled in Europe is usually, if not always, a single distillate, and the fractionated oils are scarcely commercial articles.

The yield of the oil has been variously stated. Piesse‡ puts down 9 to 10 oz. of oil from 100 lb. of the roots, while Watt mentions a yield of only 2 oz. Eric Drabble§ says the yield of the oil is from 0.4 to 0.9 per cent.

Mr. Parry thinks 1 per cent. is probably the average. According to Gildemeister and Hoffmann,|| the yield of the oil ranges between 0.4 and 1 per cent., depending on the quality of the roots. In very rare cases it goes up to a little over 2 per cent. Bacon¶ obtained 1.09 per cent. of oil from fresh and crushed Philippine roots, and only 0.3 per cent. from the uncrushed ones.

In order to find out the variation of percentage of oil in the Indian vetivert-roots, seven samples were obtained from different localities, which gave the following results on steam-distillation:

Serial No.	Locality	Month of Collection	Moisture per cent.	Ash (per cent.) in washed roots calculated on dry materials	Oil (per cent.) by steam-distillation
1	Godhra Range, Panch Mahal District, Bombay	April 1913...	8.51	2.66	0.72
2	Aimer, Rajputana ...	March 1913	10.14	3.10	1.13
3	Pilibhit, United Provinces...	April 1913...	10.46	4.30	0.69
4	Ditto, an inferior sample, thin white roots	July 1913...	9.51	4.71	0.37
5	Belgaum Forest Division, Bombay	May 1912 ...	10.88	3.84	0.99
6	Yeotmal Forest Division, Central Provinces	Aug. 1913...	9.45	3.10	0.45
7	Delhi, from the Bazar. The best long fibres used by native perfumers	Jan. to Feb. 1914	9.81	2.97	1.14

Twenty-five grams of the well-crushed roots were distilled with steam for about three days till no more oil came over. The flask containing the roots was gently heated by means of a flame to avoid the condensation of too much water. The total distillate

\* "Quarterly Journal of Institute of Commercial Research in the Tropics," Liverpool University, September 1907, Vol. II., No. 5, page 130.

† "The Chemistry of Essential Oils," page 128.

‡ *Ibid.*

§ *Loc. cit.*

|| "Die ätherische Öle," zweite Auf., zweiter Band, 1913, page 220.

¶ *Ibid.*



was collected and shaken with chloroform. The chloroformic extract was then washed, dried and filtered, and distilled off. The residue was freed from the last traces of the solvent by gentle blowing, and weighed to as near as possible a constant weight. All these samples came direct from the forests, except the last one, which was purchased in the Delhi market. It was reported to be the best *Khas Khas* used for distillation by the native perfumers and distillers. The content of oil in roots of average good quality may thus be taken to vary from 0.7 to 1.0 per cent., a figure below 0.7 per cent. showing an inferior quality of grass. The quality of the roots would mainly depend on the season of collection—other factors, such as soil, locality, etc., being of minor importance. According to the Delhi dealers, the roots for distillation are always collected towards the end of January. The sample obtained from Delhi thus collected gives 1.14 per cent. of oil, while the sample collected in August—i.e., in the rainy season—gives only 0.45 per cent. Samples from Pilibhit show a wide divergence, the sample collected in April giving 0.69 per cent., while another collected in July—i.e., in the rainy season—gives only 0.37 per cent. Of the other samples, No. 1, collected in April, gives 0.70 per cent.; No. 2, collected in March, and No. 5, collected in May, gives nearly 1 per cent.

It thus seems evident that the roots should be collected from towards the end of the winter season till the commencement of the rainy season.

#### *The Constants of Vetiver Oil.*

Seventy-five grams of vetiver oil of dark-brown colour was obtained by distilling the sample No. 4 by steam at a pressure of 40 to 50 lb. It was redistilled in the laboratory with a gentle current of steam for about ten days till no more oil came over. All the fractions of the oil thus obtained were mixed together for determination of the usual constants. The residue was a dark-red resinous mass, which was extracted with alcohol. About 9.4 grams of a dark-red resin of a brilliant fracture was obtained. It softened at 65° C., and completely melted at 70° C. It gave the following constants:

Sp. gr. at 30° C. ... ..	1.132
Acid-number ... ..	46.92
Saponification-number ... ..	111.20
Ester-number ... ..	64.28
Iodine-value (Hübl, after eighteen hours) ...	268.20
Optical rotation calculated on 10 c.c. of the solid resin ... ..	+488.04*

\* Approximately; because the solution had to be made too dilute for observation, owing to the very dark colour of the resin.

The redistilled oil, which was of a yellowish-brown colour and quite transparent, gave the following constants:

Sp. gr. at 15° C. ... ..	1.011
Optical rotation in 100-mm. tubo ... ..	-30.65
N <sub>D</sub> 20° C. ... ..	1.5165
Acid-number ... ..	10.5
Saponification-number ... ..	80.1
Ester-number ... ..	69.6
Saponification-number after acetylation ...	132.8
Iodine-value (Hübl, after eighteen hours) ...	194.4
Soluble in 2 parts of 80-per-cent. alcohol.	

The above constants are different from those already recorded by various observers. This difference may be due to the elimination of the resin from the oil by redistillation; at least, in optical rotation it is mainly due to this cause. The angle of rotation of the oil in this case is about -31°, while all observers have recorded for vetiver oil a rotation of +25° to +40°. The optical rotation of the resin is +488.4°. Taking the proportion of the oil to resin, as it is in this case, to be 8:1, the optical rotation calculated on the mixture of resin and oil comes to +34°. It seems the dextrorotation of the oil is due to the small proportion of *Khas Khas* resin. This will also have its effect on other constants. It is not known whether the constants of this oil as recorded by other observers were determined on redistilled oil or on the first distillate. If on the latter, then the constants of this resin-free oil will in all cases be different from those already published. This has yet to be confirmed.

Gildemeister and Hoffmann\* record for the oil distilled in Europe from dry roots an acid-number of 27 up to 65 and saponification-number of 36.8 to 88, and saponification-number after acetylation of 157 to 223; for the Reunion oil the acid-number ranges from 4.5 to 17 and saponification-number 9.5 to 37, and the saponification-number after acetylation 128.5 to 162.

The oil distilled in this laboratory has an acid-number of 10.5 and saponification-number of 80.1, and the same after acetylation 132.8.

Forest Research Institute,  
Dehra Dun, U.P., India.

## MEDICAL MEMORANDA.

### Fluorescein Kidney-test.

STRAUSS states in the "Berliner Klinischer Wochenschrift" that trustworthy information can be obtained in regard to the functional capacity of the kidneys by giving the patient, fasting, 1 gram of fluorescein-sodium in a cup of tea or cocoa in the morning, and then examining the urine voided at ten-minute intervals until it begins to show signs of fluorescence. After thirty hours the urine voided every hour or two is examined anew for signs of the fluorescein. In his experiments with thirty persons he found that the healthy passed distinctly fluorescent urine in from ten to twenty minutes after taking the drug, and that the fluorescence disappeared again after thirty-five or forty hours. At the beginning and close of the test a little ammonia is added to the urine to render the fluorescence more pronounced.

### Fuchsin in Soft Chancre.

MR. C. H. KANTAWALA, M.R.C.S., L.R.C.P., Bombay, informs "The Lancet" (1914, I, p. 1502) that he has found fuchsin of use in the treatment of chancre. He states:

Fuchsin in a 5-per-cent. ointment with vaseline has been found of some benefit in the treatment of carbuncles, and that led me to try it in soft chancres. During the last month I have treated nine cases of undoubted soft chancre with so much benefit that I am convinced that there is no other drug which is so useful. Under ordinary treatment soft sores take about six weeks to heal up, while with fuchsin I have been able to heal them in less than two weeks. All my nine cases were of multiple chancres (from two to four), and the average duration of treatment works out at eight days. The longest is ten and the least is four days.

It is of no benefit in hard chancres.

### Varicose Veins.

The treatment of varicose veins is thus summarised in the "Medical Press":

The usual treatment of varicose veins is the wearing of an elastic stocking or bandage and iodide of potassium or hamamelis given internally. However, something more might be done to the satisfaction of the patient. Professor Robin advises washing the legs each morning with a solution of silicate of soda (1 in 100), leaving them to dry, and then powdering them with:

P. amyli ... ..	3ij.
Zinci oxidi ... ..	3iij.
Camphor. ... ..	5j.
Ol. geranii ... ..	℥vj.

Internally, six drops at each meal, and continued for months, of—

Tinct. hamamel.,	
Tinct. viburni,	
Tinct. piscidiae ... ..	aa. 5j.

If sclerosis of the walls of the veins exists, iodide of potassium and bicarbonate of soda must be given, and the following ointment passed over the veins:

Potass. iodidi ... ..	5j.
Ergotini ... ..	5j.
Tinct. nucis vom. ... ..	℥v.
Adipis ... ..	5j.

Baths of Bagnols salt, followed by gentle massage, are also to be recommended, or, better still, the patient might be sent to the baths of Bagnols-de-l'Orne.

\* Loc. cit.



# HEINE & CO.

AKTIENGESELLSCHAFT

LEIPZIG and  
GRÖBA of Elbe

*Branches:*

*Berlin. New-York. Paris. Calcutta.*

CABLEGRAMS: HEIKO LEIPZIG.





# HEINE & Co.

AKTIENGESELLSCHAFT, LEIPZIG AND GRÖBA.

**I**mportant undertakings have often arisen out of small beginnings and owe their very existence to accidental circumstances, but it is hardly likely that any other great business house of modern times has a more interesting history than that of Heine & Co. of Leipzig. This establishment which celebrated the fiftieth anniversary of its foundation a few years ago and today holds a foremost position among German manufacturers of natural and artificial scents for perfumery and soap making, had its origin in a washhouse which the founder of the firm, Dr. Heine, built for the use of his tenants.

Dr. Karl Erdmann Heine, the son of a gentleman farmer, was born at Leipzig in 1819. After completing his education at the Thomas College, he studied law and began his career as solicitor at Leipzig in 1843. At that time Leipzig was a very small town of about 40,000 inhabitants, surrounded by gardens and building land. Heine, who had inherited extensive property outside the city, began to prepare this otherwise worthless land for building purposes, by laying it out in plots. To this end he built a bridge across the Pleisse, opposite the former Leisnburg and in 1844 commenced laying out streets on his property, which necessitated an extensive drainage of the marshy land. Dr. Heine's scheme found great favour, the more so as he built the houses at his own expense and sold them when required, erecting new ones as necessity arose. The more people moved into the suburbs from the inner city and beyond the fortress walls, which at that time still encircled Leipzig, so the demand for Heine's houses increased, although they were only of the most primitive description. For instance none of the houses had a scullery, a convenience which in those days was unknown in Leipzig. Dr. Heine, who was always open to suggestions for practical improvements, met the desire of his tenants by erecting and equipping a laundry for their common use. This laundry, a four-story building, was located near the Kuhstrang, a small brook flowing into the Elster. The motive power was supplied by a small steam-boiler, which in later years was used as a feed-water heater in the factory of Heine & Co. The tenants were supplied with water for washing from the brook and made good use of the convenience thus afforded them.

The steam-boiler producing more steam than was needed for these domestic purposes, it occurred to Dr. Heine to use the superfluous steam for some other purpose. Most probably he had observed the development of the essential oil industry, which was then in its infancy, and he was induced to turn to advantage the steam power at his disposal for the distillation of essential oils.



Dr. Karl Erdmann Heine. (Died 1888.)  
Founder of the firm.





Mr. Hans Steche.  
Managing Director of Heine & Co. A.-G. (1914).

Though the manufacture of essential oils has only been taken up and developed in modern times, it must not be forgotten, that from remotest antiquity the importance of perfumes was recognised, and various methods were employed for their production, the more so, as odoriferous plants attracted the attention of mankind from the earliest times. It must not be imagined however that the preparation of perfumes in ancient times represented an industry comparable in any way with that of the present day, for although spices and drugs were widely used, their application was limited to religious ceremonies and to the personal use of certain privileged classes. The production and preparation of perfumes in all probability was chiefly in the hands of priests, who from earliest times distinguished themselves by their knowledge of natural history and used it in various ways to their own profit. Many a modern invention has been based on indications found in ancient Egyptian and Indian records and we may conclude that even in that age there existed a highly developed knowledge of chemical-technical science. We know for instance, that distillation and distilling apparatus as well as the production of rose- and calamus oils was known in India at the time when Sanscrit was a living tongue. There are also ancient documents of the Persians, in which distillation and distilling apparatus are mentioned, the origin of which however, is legendary. — In the case of Egypt it would appear, that the production of distilling apparatus and the distillation of wine were known, as well as the manufacture of vinegar, alum, soap and colours together with the preparation and application of metals. The use of turpentine and colophonium was known and probably also the distillation of oils. No absolute proof of this exists however, as the records of the Egyptians have mostly been lost and but little is known of their industrial arts. A development of the art of distilling is first found among the Arabs in the eighth century, who brought it to a higher standard in their study of medicines and more especially through the investigations of their alchemists. The works of Dschabir: "*Traditio summae perfectionis et investigatio magisterii*", were for centuries the chief guide to practical distillation. From other works of the Arabs, for instance the book "*Liber servitoris*" by Albukasis it is apparent that the art of distilling had been eagerly taken up by the Arabs, though chiefly for medical and alchemistic purposes. The art was brought to Europe during the Crusades and was greatly developed during the twelfth century. It is an established fact that the distillation of turpentine and oil of rose was widely known in the thirteenth century as also the preparation of spirits of wine, but even then its use was principally confined to the manufacture of medicinal preparations. For a long time the distillation of aromatic liqueurs formed the principal work of European pharmacists. The production of brandy and the above named aromatic oils led to the distillation of other vegetable oils, notably those of sage — bitter almond — rue — cinnamon — and sandal-wood, all of which became known during the thirteenth and fourteenth centuries.

In Germany, where distillation was extended also to roots, fruits, leaves, etc. the work developed greatly as is evident from documents dating from the sixteenth century. The invention of printing was of considerable help in making known the results achieved and to this we owe quite an extensive literature dealing with the distillation of oils in those days. We find there the first proof, that the difference between volatile and aromatic fatty oils at least was recognised in the sixteenth century and even instructions for the production of aromatic oils were published.





Partial View of the factory of Schmoller & Bompard (Grasse).

During this period distillation was mainly carried on in the laboratories of pharmacists and the manufacture of essential oils developed considerably. It is recorded, that by the end of the sixteenth century already more than 100 different vegetable oils were known, including those of celery, clove, turpentine and sandarac. Unfortunately, however, the extensive alchemistic rese-

arches and the search for a "quinta essentia" frequently led the science of distilling astray and gave rise to numerous misconceptions. The heavy losses, which Germany suffered during the thirty-years war, had a lamentable effect upon the development of chemical science, so much so that much of the knowledge of the arts and crafts previously gained, was lost and supersti-

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Extracting Room at Grasse.



little was done for the furtherance of chemical science during the seventeenth century, but in the eighteenth the art of distilling developed somewhat, certain improvements being also made in the apparatus employed. It was only during the nineteenth century however, that by chemical research the nature of essential oils was recognised to a certain degree and an industry promoted which was no longer of an empiric character.

It would be beyond the scope of this record to trace the history of essential oils from the beginning. The path which science has taken, from the observation of vegetable substances to the commercial production of essential oils, is both long and devious and in spite of the successes achieved in this direction especially in Germany, it must be admitted, that the scientific knowledge of the nature and composition of essential oils is still in its infancy. Chemical science however, has made great strides in this department of knowledge and the important results obtained have largely contributed to the building up of the flourishing perfume industry of Germany.

Many years ago large plantations of plants, important to medical science, were started in the neighbourhood of Leipzig and more especially in Thuringia where spirituous extracts for medicines, and also for beverages, were prepared from roots, seeds, etc. This industry developed more rapidly after the introduction of steam stills and at the beginning of the thirties of the last century, we find several factories at Leipzig producing essential oils for the liqueur and perfumery trades. The first concern of this kind was that of Gebrüder Leonhard, who as long ago as 1825 distilled fennel oil at their plantations at Lützen. Gradually other oil factories were established and the development of this industry finally induced Dr. Karl Heine to establish an essential oil distillery, since the superfluous steam at his disposal from the laundry was both ample and cheap. Out of this small installation, which was erected in 1853, the firm of Heine & Co. of Leipzig was evolved and the 1<sup>st</sup> of October 1859 may be taken as the exact date of its establishment.

As Dr. Heine was too much occupied with his other work, he was unable to take an active part in the management of the young concern, and therefore decided to take into part-

nership on the above mentioned date, Otto Steche, who had for several years been employed in the factory and risen to the position of confidential clerk.

The work at the factory was at first in no way different from that of other distilleries of essential oils. Plants grown in the environs of Leipzig, such as valerian, calamus, angelica, marjoram, caraway, co-



Violet-harvest at Grasse.



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lly treated.

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gn drugs, such

andal-wood, mustard-seed, etc. etc. from which essential oils were extracted. Through the  
ufacture and sale of home-manufactured as well as of foreign distilled oils and products,  
firm soon achieved success, and in 1862 exhibited its productions at the London exhibition,  
ing an award of merit. For this occasion the first illustrated price-list of the firm was issued,  
roduction of which appears on page 16. Besides the distillation of essential oils, the  
ufacture of fruit essences, tinctures and other materials for the liquor trade was also taken  
This expansion and the increasing business, due to energetic efforts on the part of the  
agers of the concern, necessitated an enlargement of the buildings and their equipment by  
end of the sixties of the last century. Until then the factory had been supplied with steam

Dr. Heine's laundry, for which, including rent for the premises, it paid 1380 Taler annu-  
On September 30<sup>th</sup> 1869 Heine & Co. took over from Dr. Heine the factory buildings  
grounds including the private residence, at No. 9 Wiesenstrasse, and some building prop-  
y situated in Schreberstrasse for the sum of 33000 Taler (or abt. £ 5000) and so became  
ntirely independent concern. Among the factory buildings purchased, were a new boiler-  
e and a warehouse in Schreberstrasse which Dr. Heine had erected in 1868, as the one in  
up to that time, had been sold. This warehouse was, with the exception of the surround-  
walls, constructed of wood and used by the firm until 1896, when it was pulled down  
ake room for a new building. The boiler-house taken over with its equipment, contained  
boiler with feed-water heater, steam-pump, power transmission machinery and an old oscil-  
g marine-engine. In place of the water pipes leading from the Kuhstrang, a well was dug  
the premises in 1877. The old laundry was pulled down in the spring of 1869 in order  
ain space and the chimney alone remained standing until the year 1876. In spite of these  
rgements, the factory again proved to be too small at the beginning of the seventies and  
her the offices nor the works were sufficient for the increasing business. As the ever grow-  
responsibilities of management became too much for one person, a happy solution of



Rose-harvest in Southern France.



Orange-blossom-harvest.

the difficulty was found in the granting of a partnership to Theodor Habenicht, brother-in-law of Otto Steche.

Habenicht had been travelling for the house since 1867 with great success, not only throughout Germany, but also abroad. He opened a large number of accounts in Russia and Austria-Hungary, but more especially in France and Italy. In the same year

in which Habenicht became a partner, a chemist was also appointed, who had grown up in the trade and who introduced amongst other things, the distillation of mustard-seed on a small scale. At about the same period, the firm took up the manufacture of chemical products by producing synthetic mustard oil, first introduced by Dr. Gustav Krämer. This new undertaking soon became of great importance, but, under the conditions then prevailing, was attended with great difficulties. All these changes prompted the firm to erect in 1876 an extensive new building for offices and store-rooms on part of the property in the Schreberstrasse. This building was erected in what was then considered a most elaborate style, with specially strong, vaulted cellars for storing finished products.

Above the cellar, facing the street, were the offices, and adjoining these at the rear, the packing and store-rooms. On the floor above the offices was the residence of the works manager.

Adjoining the offices and warehouse a one-story distillation building was erected, without a basement however, so that very valuable space for tanks was not available, and had to be provided later at great cost. Seeds were dried on the zinc roof of this still-house as well as on that of the four-story main building No. 17, Wiesenstrasse behind which the distillery was located. As no lift existed, the conveyance of seeds to the roof was most tedious, for they had to be carried up and down on the backs of workmen and if rain fell suddenly, all hands were called up to save the material from being washed away. This primitive method of drying was retained until 1886, when a steam drying-apparatus was installed. The distillation building was 40 m long and 12 m deep, with windows on three sides and a sky-light, which also served as ventilator, in the roof. The building was illuminated by gas.

Adjoining this still-room were the rinsing and washing vat rooms. These rooms were also put to other uses in those days, such as for washing the directors' linen and as a slaughter house for the pigs, which the farmers sometimes brought to the factory when delivering their herbs and seeds.



When the boiler-house was rebuilt, a new boiler with a heating surface of 64 sqm was installed and an octagonal chimney erected, 34 m in height. The boiler was fed by a pump driven by a belt, while the aforementioned oscillating steam-engine remained in service for the time being. In the boiler-house machinery was installed for crushing and grinding seeds. As



Distillation of Lavender.

It will be seen from this, space in the rebuilt premises was still rather limited and the warehouses and store-rooms, which principally consisted of sheds, would neither have come up to the requirements of the present building-laws nor of the business as it is to-day. Shortly after the new factory was built, the old one was pulled down and private houses erected in its place. The distilling plant had been enlarged during rebuilding and now consisted of 14 stills with a total capacity of about 5000 Litres. The distilling process still remained somewhat cumbersome. The water for instance was transported by hand, first in glass vessels and later on in metal vessels, to the rectifiers, the latter being filled by means of pails and put out of action during the operation. As yet no satisfactory control of the work was in existence; it was carried on in a leisurely and almost haphazard manner. On October 1<sup>st</sup> 1884 the firm celebrated the 25<sup>th</sup> anniversary of its foundation and a fund for assisting employees in case of sickness and necessity was founded by a donation of M. 10,000. In memory of Dr. Karl Heine a relief portrait in marble, executed by Professor Strassen, was placed in the factory. Otto Steche had already completed his 25 years of association with the firm on October 1<sup>st</sup> 1878.

The period up to about 1887 was a quiet and uneventful one in the development of the business, all that is worthy of mention being the revision of the calculations in respect of all products prepared with spirit, necessitated by the new alcohol duties imposed, and the resulting greater activity, as larger quantities of these spirituous products had to be kept in stock. The production of aniseed-oil, chiefly for the Spanish market, was greatly increased. In consequence of this increased output and the necessity of storing large quantities of goods for urgent orders the factory had to be rebuilt once more in 1887. Shortly afterwards the founder of the firm, Dr. Karl Heine, died at the age of nearly 70. The work of this highly talented and practical man of business, was of great value not only to the firm of Heine & Co., but also to the city of Leipzig through the development of the suburb of Plagwitz.

A monument to his memory was erected on the Weisse Bridge at Leipzig on April 20<sup>th</sup> 1897.



Branch House at Calcutta.

The demise of Dr. Heine afforded the proprietors of the firm the opportunity to take into partnership, Dr. Albert Steche, the eldest son of the senior partner. Dr. Steche had studied at Dresden and Würzburg and entered the firm's service as a chemist in 1887. Under his management the entire working of the factory was reorganised on scientific principles and in the newly en-

gaged chemist, Dr. Hugo von Soden, he found an energetic and intelligent assistant.

A second laboratory was equipped and a third chemist, Dr. Albert Hesse, formerly an assistant of Professor Wallach of Göttingen was engaged, to devote himself exclusively to scientific research. The business was now placed on a more scientific basis, as Dr. Steche recognised that a pursuance of the labours of Prof. Wallach of Göttingen would necessitate an entire readjustment of the factory work. In this way a separate chemical department was created, apart from the manufacture of essential oils and essences, which achieved great success from the very beginning. The manufacture of quite a number of important products was taken up, including Terpeneol, Heliotropin, Geraniol, Citral, Eucalyptol and Nerolin. Artificial Wintergreen oil too, which was becoming an article of importance, was produced upon what was then considered a large scale. When after considerable difficulty the organisation of the chemical department was completed, the inadequacy of the available space for the increased requirements of the factory was all too apparent, and once more building operations were resumed.

At the end of the eighties, when German industry in general made rapid strides, the firm participated in the general prosperity, its export business with all parts of the world was much extended and its continental trade was constantly on the increase. In consequence of this continual expansion it became evident, that no further extension of the works would be possible without the addition of entirely new buildings. After prolonged consideration of the difficult question as to whether it would not be preferable to move the entire factory from this part of Leipzig, which had meanwhile become the most aristocratic and expensive suburb of the city, the proprietors finally decided to erect a new building on the same spot, which had proved so favourable to the development of their business.

This decision was almost forced upon them by the necessity of carrying on the work without perceptible interruption during rebuilding.

Started in 1895 and continued during a period of almost uninterrupted building and



building, extending over 3 years, a new factory was erected, which answered all modern technical and hygienic requirements. The distilling rooms, especially those in the chemical department, were considerably increased in number and size and the basements equipped with refrigerating plant. The offices were enlarged to twice their former dimensions and splendid laboratories provided, for further scientific work. During these developments in the factory and simultaneous improvement of the apparatus and working methods, an important change had to be taken place in the management of the concern. In 1893 Hans Steche, second son of the senior partner, was taken into partnership, after having studied the drug trade and generally enlarged his vision and commercial experience by a prolonged stay abroad.

Otto Steche senior, who had for some time been greatly hampered in his work by a disease of the eyes, gradually withdrew from business, leaving the entire management to his three partners. He finally retired from the firm on October 16<sup>th</sup> 1896.

The essential oil- and perfumery industry had undergone a radical change during this period. The sustained labours of prominent scientists, such as Wallach, Semmler, Thieman and others, had exercised a stimulating influence on the trade, and induced manufacturers, of whom the firm of Heine & Co. was now among the foremost, to assist actively in the solution of any difficult but interesting chemical problems, which resulted in a gratifying extension of the German essential oil and perfumery industry. In the laboratory of Heine & Co. extensive investigations of the most important essential oils were carried out during the nineties under the supervision of Dr. von Soden and Dr. Hesse, assisted by junior chemists, some of them pupils of Professor Wallach, and the practical results of these researches considerably increased the output of the chemical departments. Some idea of this activity may be gathered from the fact that between 1894 and 1909, 17 German patents were taken out by the firm to protect their own manufacturing processes, and during that same period a great number of scientific articles were published by the firm's chemists, arousing great interest in the trade, and bringing about important changes in manufacturing methods generally.

In the year 1896 the firm began to pay special attention to flower essences, a step which opened up the way for rapid and almost phenomenal development. — The largest flower-garden in the world, which has been for many years the centre of culture of flowers for perfumery, is situated in the beautiful south of France and encircles the small town of



Sandal Wood Auction at Mysore.



Collecting Sandal wood, Mysore.

Grasse, picturesquely situated in the mountains and close to the sea. Enormous quantities of sweet scented flowers, such as violets, roses, jasmin, orange, mignonette, etc. are cultivated there annually, from which the world-renowned French extracts are obtained.

The tests, originally made for other purposes, with these floral-extracts, partly in the form of solid pomades, partly of spirituous extracts, led the firm to examine on scientific lines the composition of these valuable but exceedingly delicate flower products with a view to their subsequent synthetic preparation.

For this purpose Heine & Co. entered into close and most friendly relations with the firm of Schmoller & Bompard at Grasse. The factory of this firm was considerably enlarged, and equipped with the best apparatus and laboratories, to enable it to produce, under the supervision of the Leipzig chemists, and in a profitable and practical manner, the large quantities of material required by the Leipzig factory for scientific and trade purposes.

We take this opportunity to tender our heartfelt thanks to the proprietors of the firm of Schmoller & Bompard, particularly to Mr. Honoré Guichard, for his most valuable and intelligent assistance. It must also be gratefully acknowledged that Heine & Co., although in keen competition with the local French firms, have invariably been able to maintain the most friendly relations with them. Having thus established conditions favourable to a continuance of its operations, the firm, with the aid of competent chemists, proceeded to solve its interesting problem.

The industry of artificial scents has in some aspects of its development certain similarities to the dyestuff industry, although in other important respects it differs materially. The dye-stuff industry has only furnished the consumer with a small number of products which are synthetic reproductions of natural colouring substances. The majority of organic dyestuffs are artificial products, produced as a result of the experience gained in the study of a small number of natural colouring substances. The recognition of the importance of the so called "chromophorous" groups suggested the possible use of certain newly produced dye-stuffs. In the perfume industry however, chemical research had to proceed on entirely different and more difficult lines. It would require an excessive amount of material to determine the nature of the "odorophorous groups" in the way that the "chromophorous" groups were investigated (compare Klimont, "Synthetic and isolated Aromatic bodies Leipzig 1899"). Even if the material for observation were available, which, as shown by the experiments of Klimont, would comprise nearly all organic bodies, this would not be of much service to the industry of artificial scents, since an odorous body is not of necessity a perfume. It will always remain exceptional for an odorous body, obtained from natural odorous substances without analytical study, to become of permanent value to the perfume industry. Heliotropine, Myrbane-oil, artificial musk, etc. show, that valuable scents can be obtained in this way, but attempts to proceed on these lines in a general way would hardly be successful.

The first point to be determined in the manufacture of artificial scents must be the chemical



composition of the odorous substances produced in such great variety by nature and then their production by synthesis.

The solution of this problem by the chemist was formerly regarded as almost impossible. The floral odours were considered so eminently fine and delicate, that one was almost afraid to approach these lovely products of nature with such rough means as chemical analysis. The last decades have shown however, that even the finest of floral odours can be successfully subjected to chemical examination and it has been possible to determine with certainty the main constituents of the odorous principles of orris-root, orange-blossom and jasmin.

The difficulties attending such chemical researches are evident, when one considers what has already been accomplished and what still remains to be achieved. For decades the most prominent chemists devoted themselves to the study of essential oils and their constituents and as soon as the terpenes and terpene-derivatives, which form the main constituents of natural odorous substances were discovered, and their character determined, science proceeded to unravel the mysteries of their atomic construction.

The examination of the composition of essential oils as to their remaining constituents was even more difficult. During these studies the surprising fact came to light, that although the terpene-compounds are in quantity the principal constituents of natural odorous substances, the smaller proportions of other bodies, which determine the nature and character of the oil, belong to different classes of the organic Kingdom. The investigation of these bodies however, is very difficult, partly owing to the minute proportion in which they frequently exist and partly on account of the cost of the raw material.

In spite of all this, Heine & Co. have not hesitated to expend the large amount of money and labour necessary for this purpose and since the beginning of the nineties have endeavoured to solve the problem of isolating these constituents and reproducing them synthetically. Some of the results have been published in scientific papers and the data given therein

are ample testimony to the difficulties encountered in these researches. As an example of the great expense connected with such work, the fact may be cited, that an outlay of 15000 Marks is required to obtain only 100 gs. of Indol or Jasmon from Jasmin pomade, without taking time and labour into account.

It is a great satisfaction however to realise that money and labour have not been wasted and that quite a number of the most important constituents of exceedingly valuable natural



Sandal wood logs.





Champacca-tree.

odorous bodies, have been isolated and imitated artificially, thus permitting by accurate blending an exact reproduction of the respective products of nature.

Chemical research of natural perfumes however, has its limitations: inasmuch as some chemical combinations are found in such minute quantities in the complex structure of floral odors that the isolation of a quantity sufficient for further investigation would consume far too large an amount of material. In order to obtain the small quantities of odorous substances required to round off the synthetic flower oils, Heine & Co. have had recourse to the odorous substances provided by nature, reproducing these in a concentrated form by a special process, without in any way impairing the fragrance of the original perfumes and combining them with synthetic flower oils.

Natural perfume products will always retain their value and use, as they are indispensable for artificial production, in fact the experience of the firm has shown that the introduction of an artificial substitute, increases the consumption enormously

without decreasing the demand for the corresponding natural products. The flower industry therefore will not be ruined, like the indigo trade, but will, on the contrary, benefit by chemical research and will on account of increased consumption have its own share of profit quite apart from the fact that chemical study will aid the industry in improving its methods of production.

In proper recognition of these facts, Heine & Co. have in their well-known.

HEIKO (Heiko-Heine & Co.) FLOWER-OILS chosen an ideal combination of nature and art.

They have the strength of artificial scents and possess at the same time the freshness and natural fragrance of the flowers. More true to the original than purely synthetic products, they are also more concentrated and considerably less expensive than the natural products because the odorous principles can frequently be prepared cheaper artificially.

The manufacture of synthetic flower oils has grown tremendously within the last ten years and must be regarded as one of the most important factors in the development of the perfumery trade both at home and abroad.

Although even in earlier years success had attended the endeavours to utilise these chemical inventions on a manufacturing scale and to extend the trade in essential oils, the development of the industry as a whole was greater than the Leipzig factory was able to cope with. Originally situated outside the city, the factory was now entirely surrounded by private residences, to the needs of which great consideration had to be paid. By enlarging the



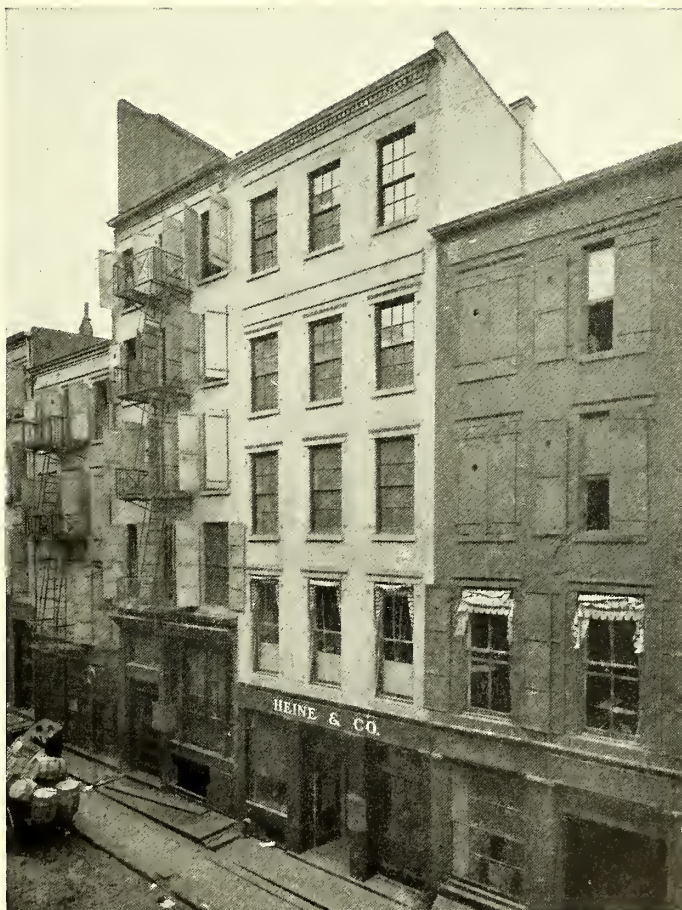
apparatus and improving the methods of distillation, and by the introduction of night-work, the firm was for a time able to meet the increasing demand, but these expedients proved insufficient in the long run and finally obliged the proprietors either to rebuild the factory on the same spot or erect an entirely new one elsewhere. This important question had already been under consideration before rebuilding in 1896, but a transfer of the works under conditions then prevailing seemed inadvisable and it was at that time decided, to leave the factory on the old spot, rather than to endanger the development of the undertaking. The progress of events however, made it imperative to regard the matter from another point of view and the proprietors finally decided to build a new factory outside Leipzig, and began the work in 1906. A building site comprising 50,000 sqm was chosen at Gröbä, near Riesa in close proximity to the Elbe harbour.

The deciding factor in the acquisition of this site was the advantages offered in cheaper transport not only of the drugs required for distilling, which could now be sent up the river Elbe from Hamburg, but also of the Bohemian brown coal brought down this river. Apart from this the direct railway connection already in existence on this property, was of great importance for the despatch of the firm's products.

Another point for consideration was the sufficiency of space available there for a gradual extension of the works, while the highly developed state of agriculture in the districts surrounding Riesa offered special facilities for the sale, as cattle food, of the large quantities of exhausted seeds obtained after distillation.

Work in the new factory, erected under the supervision of Dr. Steche according to plans drawn by himself, was started in 1907, and though it was at first intended chiefly for housing the large stills, the chemical departments, which had meanwhile been considerably enlarged, were also gradually transferred to the new factory, the technical details of which will be described later on.

Soon after work had been started in the new factory, the firm sustained a deplorable loss in the death of Otto Steche, the senior partner, who had retired from business in 1903 and on that occasion had made a donation of 100,000 Marks towards the establishment of a sick-fund for the employees. He died in 1908, 74 years old, mourned by all who had ever come into contact with him. The second senior partner, Theodor Habenicht, who had also contributed largely to the development of the business, retired from the management in 1904, in order to devote more of his time to his extensive commercial-political interests.



Office Building of the New York branch.



BERLIN.  
ADOLPH SCHUCHARD.

BREMEN.  
W. BECKER.

CHRISTIANIA.  
A. KNUDSEN.

COPENHAGEN.  
S. BLOCH.

DRESDEN.  
G. VOOGT.

HAMBURG.  
H. W. DORRICK.

KÖNIGSBERG.  
G. ARON.

LONDON.  
J. L. PFUNGST & CO

PARIS.  
P. COMTE.

ST. PETERSBURG.  
H. M. TIEDEMANN

PRAO.  
JOH. HAENEL.

RIGA.  
W. SEUBERLICH

STOCKHOLM.  
H. PLANTHAGEN

TRIEST.  
M. HUMMEL.

WARSCHAU.  
HERMAN, KLEINADEL

WIEN.  
L. HOFFMANN

Heine & Co Leipzig.



DISTILLERS  
of Essential Oils, Spirituous, Essences and Ethers  
for the Composition of Liquors, Perfumes etc.

LONDON AGENTS: J. L. PFUNGST & CO., WINE MERCHANTS 32, CRUTCHED FRIARS E. C.

AETHERISCHE OELE.

- Alantöl.
- Angelicöl aus Samen.
- Angelicöl aus Wurzeln.
- Anisöl aus deutschen Samen.
- Anisöl aus russischen Samen.
- Apfelsinenöl.
- Arnicaöl aus Blüten.
- Arnicaöl aus Wurzeln.
- Asphaltöl.
- Baldrianöl.
- Bergamottöl.
- Bergamottöl, rectificirt, weiss.
- Birkentheeröl, rectificirt.
- Buccoblätteröl.
- Cajeputöl, grünes.
- Cajeputöl, rectificirt, weiss.
- Calmusöl.
- Cardamomöl Ceylon.
- Cascarillrindenöl.
- Cassiaöl.
- Cedernholzöl.
- Chamillenöl a. deutschen Blumen.
- Chamillenöl mit Citronenöl.
- Chamillenöl a. römisch. Blumen.
- Citronell- od. ostünd Melissenöl.
- Citronenöl.
- Citronenöl, rectificirt, weiss.
- Citronenschalenöl.
- Cognac- oder Weinbeeröl.
- Copaivabalsamöl.
- Corianderöl aus Samen.
- Cubebenöl.
- Cuminöl aus Samen.

ESSENTIAL OILS.

- of Elecampane.
- „ Angelica seed.
- „ Angelica root.
- „ Anis seed (German)
- „ Anis seed (Russian)
- „ Orange.
- „ Arnica flowers.
- „ Arnica roots.
- „ Asphalte.
- „ Valeriana.
- „ Bergamotte.
- „ Bergamotte white rectified.
- „ Birch Tar, rectified.
- „ Buchu leaves.
- „ Cajeput (green)
- „ Cajeput white rectified
- „ Calamus.
- „ Cardamome Ceylon.
- „ Cascarilla.
- „ Cassia.
- „ Cedarwood.
- „ Camomills vulgar pure.
- „ Camomills with Lemon Oil.
- „ Camomills roman.
- „ Belm of East- Indies.
- „ Lemon.
- „ Lemon white rectified.
- „ Lemon white rectified Peels.
- „ Grape.
- „ Copaiva.
- „ Coriander seed.
- „ Cubebs.
- „ Cumin seed.

HUILES ESSENTIELLES.

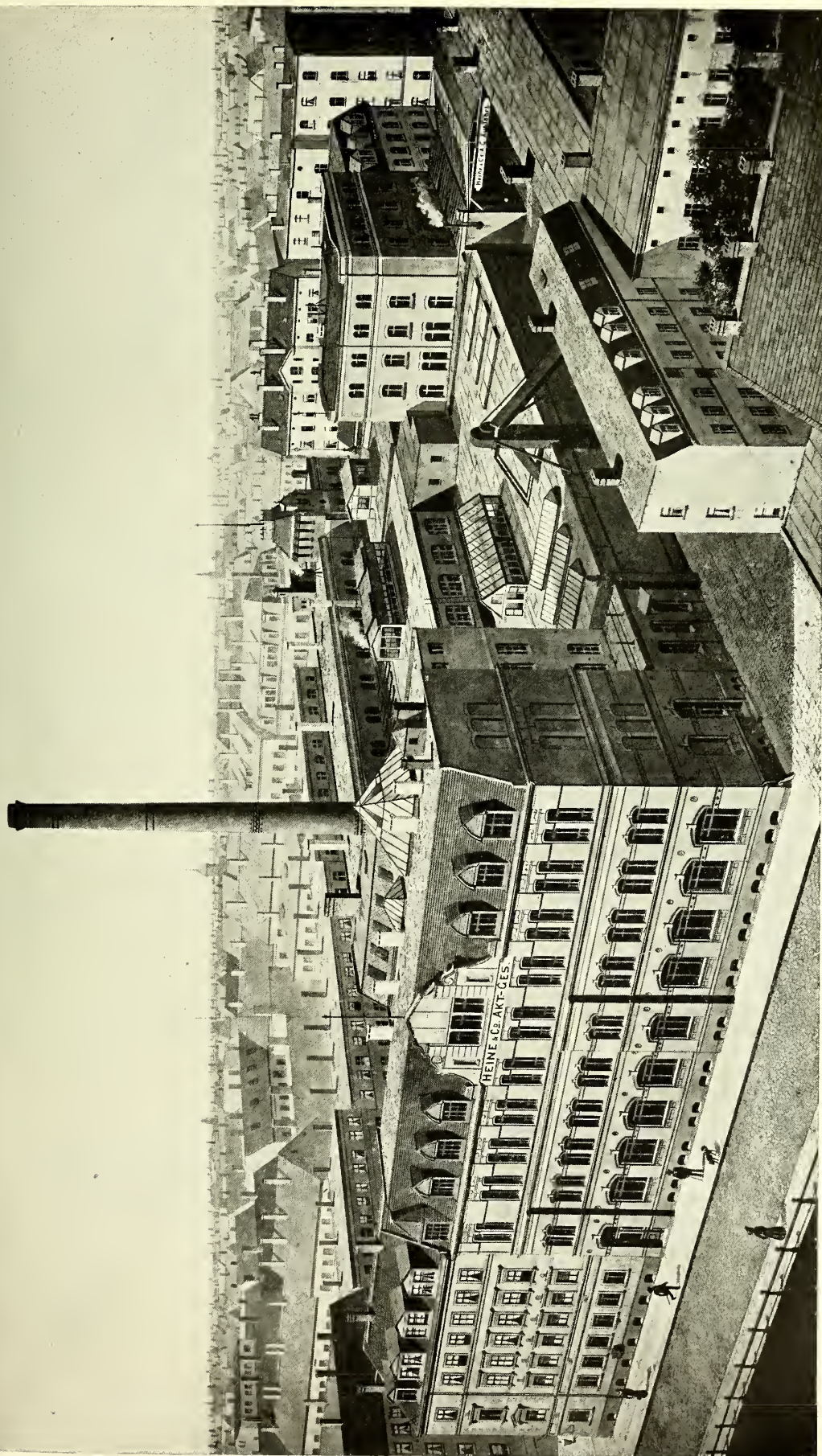
- d'Aunée.
- d'Angélique de la semence.
- d'Angélique de la racine.
- d'Anis d'Allemagne.
- d'Anis de la Russie.
- d'Orange douce.
- d'Arnique de la fleur.
- d'Arnique de la racine.
- d'Asphalte.
- de Valérian.
- „ Bergamotte.
- „ Bergamotte blanche rectifiée.
- „ Bouleau empyr. rectifiée.
- „ Bucco.
- „ Cajeput (verte).
- „ Cajeput blanche rectifiée.
- d'Acore.
- de Cardamome de Ceylan.
- „ Cascarille.
- „ Cannelle de Chine.
- „ Bois de cèdre.
- „ Camomille bleue pure.
- „ Camomille citrate.
- „ Camomille romaine.
- „ Melisse des Indes.
- „ Citron.
- „ Citron blanche rectifiée.
- „ Citron au zeste.
- „ Cognac (de Lie de vin)
- „ Copahu.
- „ Coriandre de la semence
- „ Cubèbe.
- „ Cumin de la semence.

OLJ ETEREI.

- d'Enula.
- d'Angelica (seme).
- d'Angelica (radici).
- d'Anici d'Alemagna.
- d'Anici di Russia.
- d'Arancio.
- d'Arnica (fiori).
- d'Arnica (radici).
- d'Asfalto.
- di Valeriana.
- „ Bergamotto.
- „ Bergamotto bianco.
- „ Betula.
- „ Bucco.
- „ Cajeputo verdo.
- „ Cajeputo bianco.
- „ Calamo aromatico.
- „ Cardamomo di Ceylon.
- „ Cascarilla.
- „ Cassia.
- „ Legno cedrino.
- „ Camomilla d'Alemagna.
- „ Camomilla limona.
- „ Camomilla di Roma.
- „ Melissa d'India.
- „ Limone.
- „ Limone bianco.
- „ Scorza di Limone.
- „ Cognac (ossia d'acini d'uva).
- „ Copaiva.
- „ Coriandolo.
- „ Cubebe.
- „ Carvi di Roma.

Leipzig Buchdr v. C. B. Lörck





General view of the Factory of Leipzig.





Administration Building, Leipzig

Whilst the technical management of the house remained under the supervision and control of Dr. Albert Steche, the commercial management of the firm has since 1904 been exclusively in the hands of Hans Steche. Duly recognising the great future in store for the manufacture of artificial scents and synthetic flower oils, he assisted his chemists by all available means and,

as far as his time permitted, took an active part in the production of the now world-renowned "Heiko" flower oils. After surprisingly good results had proved, that the right course had been chosen, it was but a question of utilising as far as possible, in a commercial way, the present and prospective successes of the firm's scientific work, and of developing by the aid of these specialities, which had found such great favour in the perfumery trade of Europe, the firm's export business, which at that time was still comparatively small.

It is easier for the responsible manager of a firm than for a traveller to establish commercial relations on new ground, he being able of course to judge matters from a broader standpoint and dispose of them at once. In order to become acquainted with foreign countries and people Mr. Hans Steche decided to start on a business tour round the world which extended over 1906 and 1907. This decision proved of great importance to the firm, for apart from other valuable results of the trip, the foundation was then laid of the firm's extensive commercial relations with India and Eastern Asia.

A large outlet for the firm's products was thus created and the Eastern trade has increased year by year. Later on Dr. Albert Steche also travelled through other parts of the world for scientific purposes, obtaining many interesting results and acquiring much valuable experience.

By such eminently practical methods has the business of Heine & Co. both at home and abroad been augmented from year to year. The increased sale of the firm's specialities is no doubt due in part to general prosperity, but in the main it must be attributed to the superiority of these products, by means of which the competition of small and old fashioned concerns was easily overcome whenever it was a question of quality or of the supply of large quantities. The remarkable success achieved in Germany, soon made itself apparent abroad. A large portion of the firm's products is exported to France and Russia, two countries which have proved capable of taking them in increasing quantities, whereas Italy is a less favourable market. In England too the house has succeeded in establishing a firm footing and in fact it may be





General office, Leipzig.





Works Laboratory, Leipzig.

said, that the firm's connections now extend throughout the world. The trade is conducted by 125 agents in the principal markets, by branch offices holding stocks in Berlin, Paris, London, Moskow, Calcutta, Bombay, Melbourne, Madras, Yokohama and Kobe, while a special branch establishment at No. 7 Platt Street, New York, deals with the trade of the United States of America and Canada. The head of this branch is Mr. Hans Steche, President of the entire concern, whilst Messrs. F. E. Tönnies and P. Schulze-Berge act as manager and treasurer respectively.

The great increase of activity again necessitated an enlargement of the works which was accomplished by extending the branch factory at Gröba. The firm acquired some adjoining land, thereby enlarging the property to over 100,000 sqm. In order to place the undertaking financially also on a more modern basis, it was turned into a joint-stock company on March 1<sup>st</sup> 1911, with a capital of 4 million Marks, since increased by another 600,000 Marks. The first two annual reports of the Company show that the development of the business has suffered no check by this change in its constitution, a dividend of 12% in 1912 and 15% in 1913 having been declared after setting aside an ample reserve.

Hans Steche stands at the head of the company as managing director, while Rudolf Bauer, Karl Wilhelm Kummer and Kurt Treskow are confidential clerks of the commercial department.

The board is composed of:

Geheimer Kommerzienrat Theodor Habenicht, chairman,

Dr. Albert Steche, vice-chairman,

Bank director and Consul Eugen Naumann and

Dr. jur. E. Wendlandt, Syndic of the chamber of commerce of Leipzig.





Scientific Laboratory, Leipzig.

The Company's staff in the commercial and technical departments at present numbers and includes 15 chemists, 1 engineer, 2 perfumery specialists and 9 travellers, the latter visiting all parts of the world, while about 160 men and women are employed in the two factories.

In case of unforeseen distress all employees are entitled to receive relief from the Otto Steche fund (100,000 Marks) while an additional fund, devoted to the same purpose has been started by the company, and this will also next year reach a total of 100,000 Marks. In case of confinements and deaths, substantial assistance is given immediately, while in other cases sums, varying in amount, are granted on application. All employees receive allowances at Christmas; annual holidays with full pay are given them according to the length of time they have been in the service of the company.

Following up the history of the development of the firm of Heine & Co. by a brief description of both the Leipzig and Gröba works, we will first indicate the plan upon which the work is apportioned between them. The administration, commercial management, shipping department and the manufacture of the more important flower products have been retained at Leipzig, while the distillation of seeds, herbs, woods, etc., with the chemical departments and the manufacture of essences and fruit-ethers have been transferred to Gröba in view of the cheaper freights and greater facilities for the clearing of goods through the customs.

By the reconstruction of the main building the Leipzig factory in Schreberstrasse has assumed a quiet and dignified aspect, which is enhanced by the superior fittings of the offices, the Managers' rooms and the board-room in particular being most tastefully and artistically furnished. All the rooms are well lighted and ventilated and the general office, of 300 sqm floor surface and 4½ m high is quite an imposing sight and worthy of the company's high position. The various floors are connected by 3 electric lifts for passengers, books and merchandise. The firm's own telephone exchange is fitted up for 50 connections with the outside and with every department of the works. Large dressing-rooms and lavatories are provided and the sanitary arrangements are perfect.



Storage Cellar, Leipzig.

Owing to continual building and rebuilding during many years, the old factory is now hardly recognisable. — The various buildings are grouped around a yard, the warehouse, boiler-house and the workmen's dining- and bath-rooms being on one side, while opposite to these stands a threestory building, in the basement of which ice machines, centrifugals and pumps are erected. A large distillery of the chemical department is situated on the ground floor and on the floor above are smaller rooms for the manufacture of flower oils, the top floor being utilised for the storage of glassware. The whole is surmounted by a handsome water tower. The horse-shoe thus formed is completed by the vacuum room, engine house and stock rooms. The four-story warehouse and boiler-house, containing 3 water-tube boilers of 500 sqm. heating surface each, are accessible from a street owned by the company. These boilers generate the necessary steam for the 80 HP. steam-engine which not only drives the transmission in the



re factory, but runs 3 dynamos, supplies the works with light, and the various elevators in the requisite power. The water-tower is supplied by 2 steam-pumps, lifting about 3000 Litres per minute. The most important industry of the Leipzig works, as already mentioned, is the manufacture of natural and artificial flower oils, for which 250,000 to 300,000 kg of flower are usually treated at Grasse and the raw extracts forwarded of Leipzig. Here they are thoroughly refined and in the extensive perfumery laboratories turned into the renowned "Heiko" flower oils. The entire first floor of the main building is taken up by numerous laboratories devoted to the investigation of natural flower extracts and research upon new perfumes.

Parallel with the whole length of the offices, are the despatch departments and below

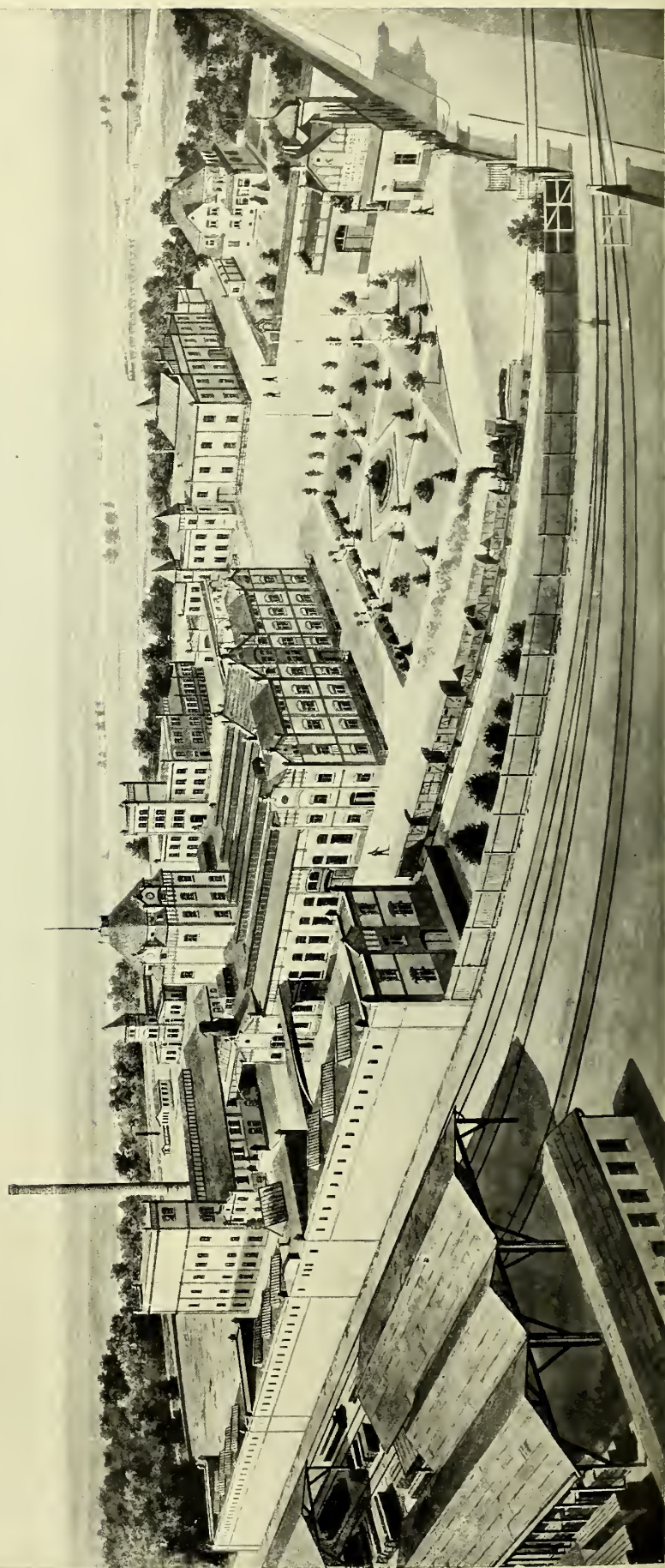


Shipping Office, Leipzig.

the large cellars containing valuable stocks of finished products. On the top floor of the main building are a special shipping department for the Indian trade, and excellent work-rooms and recreation rooms for the female employees. Ample light, abundant air and the greatest cleanliness prevail. It only remains to be mentioned that the enormous quantity of tins required for export, is produced in the company's own work-shops, while a permanent staff of copper-smiths and carpenters is employed for the numerous repairs and replacements of apparatus.

While the Leipzig factory has not been built on an entirely harmonious plan, — as is often the case with establishments originating from small beginnings and extended during a long period when the possibility of great development could not be anticipated, — the works at



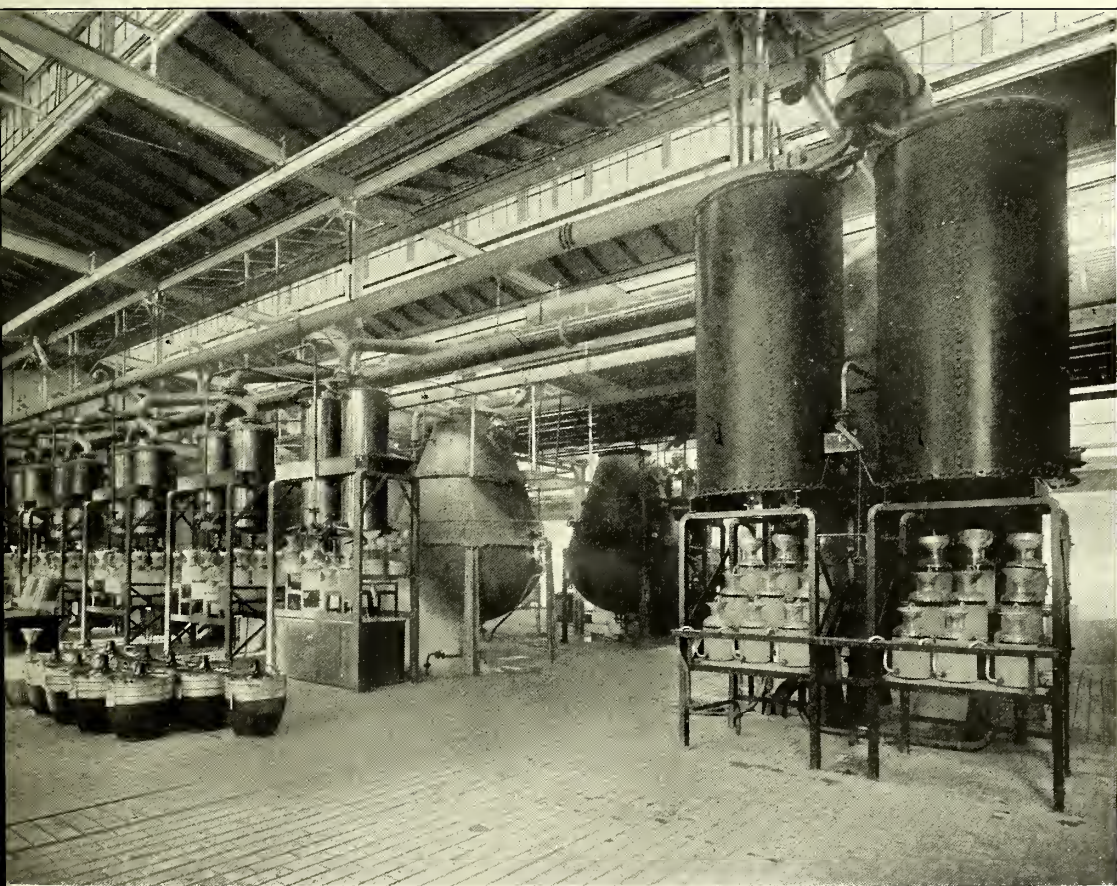


General views of the works at Gröba.



öba were erected in a more systematic manner. In these newly constructed works, the best technical equipment was installed and the economy of working has been reduced to a great art. As the strong odours prevailing in the perfume industry necessitate good ventilation, these works chiefly consist of large halls, most efficiently ventilated by sky-light. A further advantage of these sky-lights is the excellent light they give. The gallery system adopted also facilitates the provision of the large and cool cellars so essential for storage. As a factory covering such a large area, requires special facilities for traffic, a net work of narrow-gauge rails has been laid down connecting all the yards and buildings. When required, the waggons are moved by electric cranes to the galleries or lowered into the cellars and, as may be seen from the annexed plan of the factory, the incoming and outgoing traffic is carried on by means of a siding connecting the works with the harbour railway, and running alongside the warehouse and the coal-depôt. Inside the factory grounds traffic is regulated by means of an electric switch arrangement. Entering by the porter's lodge and passing through a beautiful garden, one's attention is first attracted by the large building containing the stills, surmounted by the imposing distillation tower illustrated on the cover of this pamphlet, after which the boiler-house with the stilleries is reached.

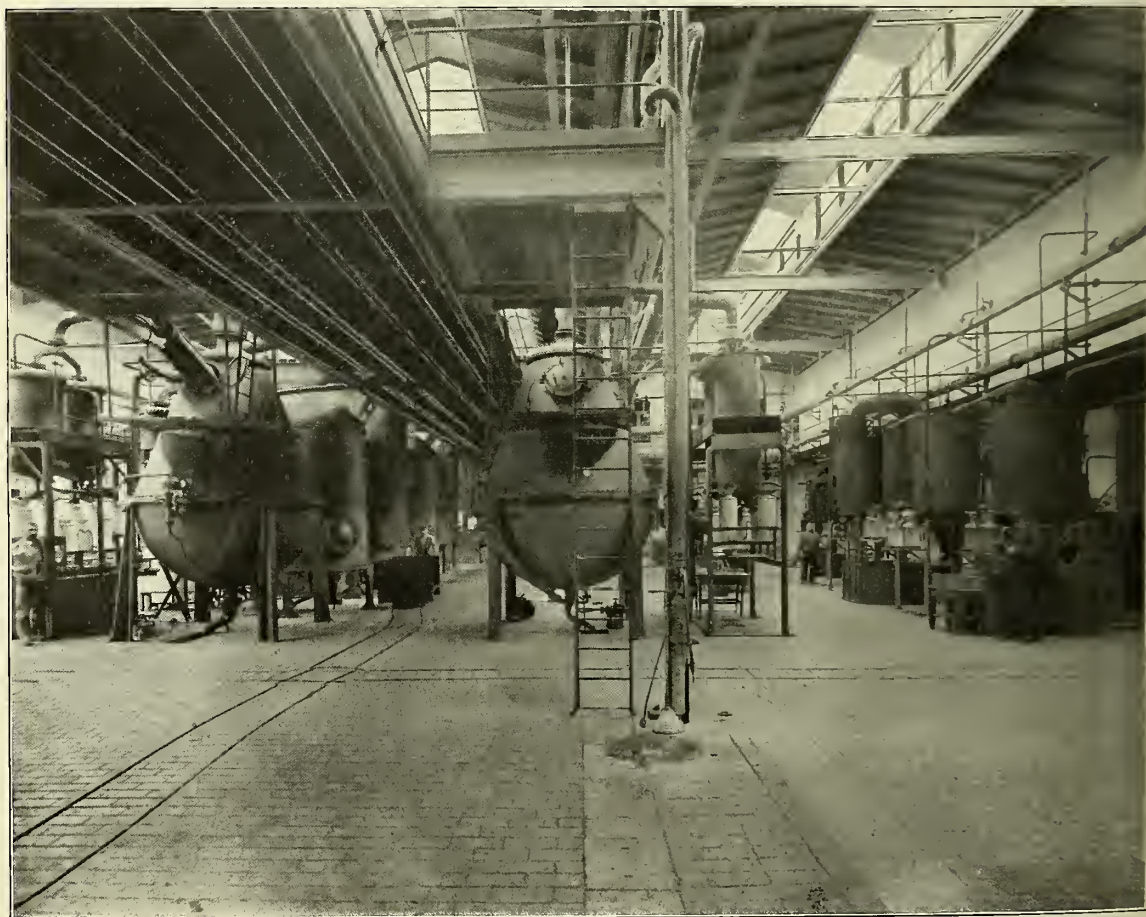
To the left of these buildings, the warehouse, 80 m long, runs along a street 20 m wide, while to the right of the main building, separated by a street, 25 m wide, are situated the buildings for the manufacture of inflammable perfumery materials, and the laboratory. The entire



Part of the Gröba distilling department.

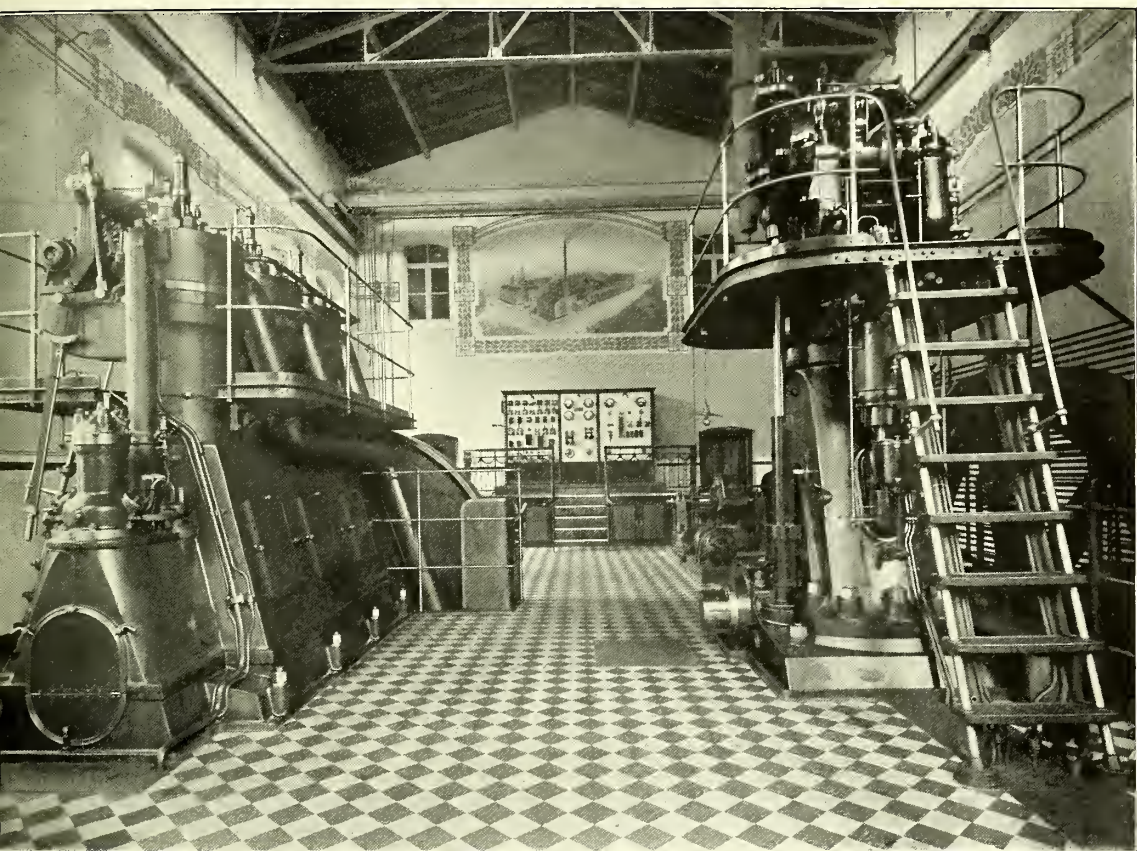


surface covered by buildings now amounts to 30,000 sqm and as indicated by diagonal lines on the ground plan, further symmetrical additions are now under consideration. In the centre of all the buildings stands the boiler-house, from which enormous quantities of steam for distilling purposes are distributed in all directions by six Cornwall boilers of 110 sqm heating surface each and their number is to be doubled next year. The coal, principally Bohemian brown coal, of which more than 10,000 tons are used annually, is delivered by the railway alongside the boiler-house and lifted by elevators to the depot holding 40 waggon loads. After passing over an automatic weighing machine, the coal is conveyed through tubes to automatic stokers, which distribute it evenly over the furnaces, thus obviating any cooling down of the boilers by opening the furnace doors. The 6 boilers are attended to by 2 firemen only. The power-plant is independent of the boiler-plant and consists of 2 Dieselmotors of 500 HP. together, erected in the large engine-room of the main building. Directly below these are the tanks for storage of motor-oil. As power has to be conveyed over great distances, electric driving has been resorted to and 14 motors of from 1 to 60 HP. have been installed in the various shops. These motors are supplied with current from large dynamos and furnish also the current for the storage battery provided for lighting purposes. Large quantities of water being required for distilling purposes, this is supplied by 20 wells and the Döllnitz brook, which flows through the property. Two large steam-pumps and two electrically driven turbine-pumps lift the water to the tower 30 m



Part of the Gröba distilling department.



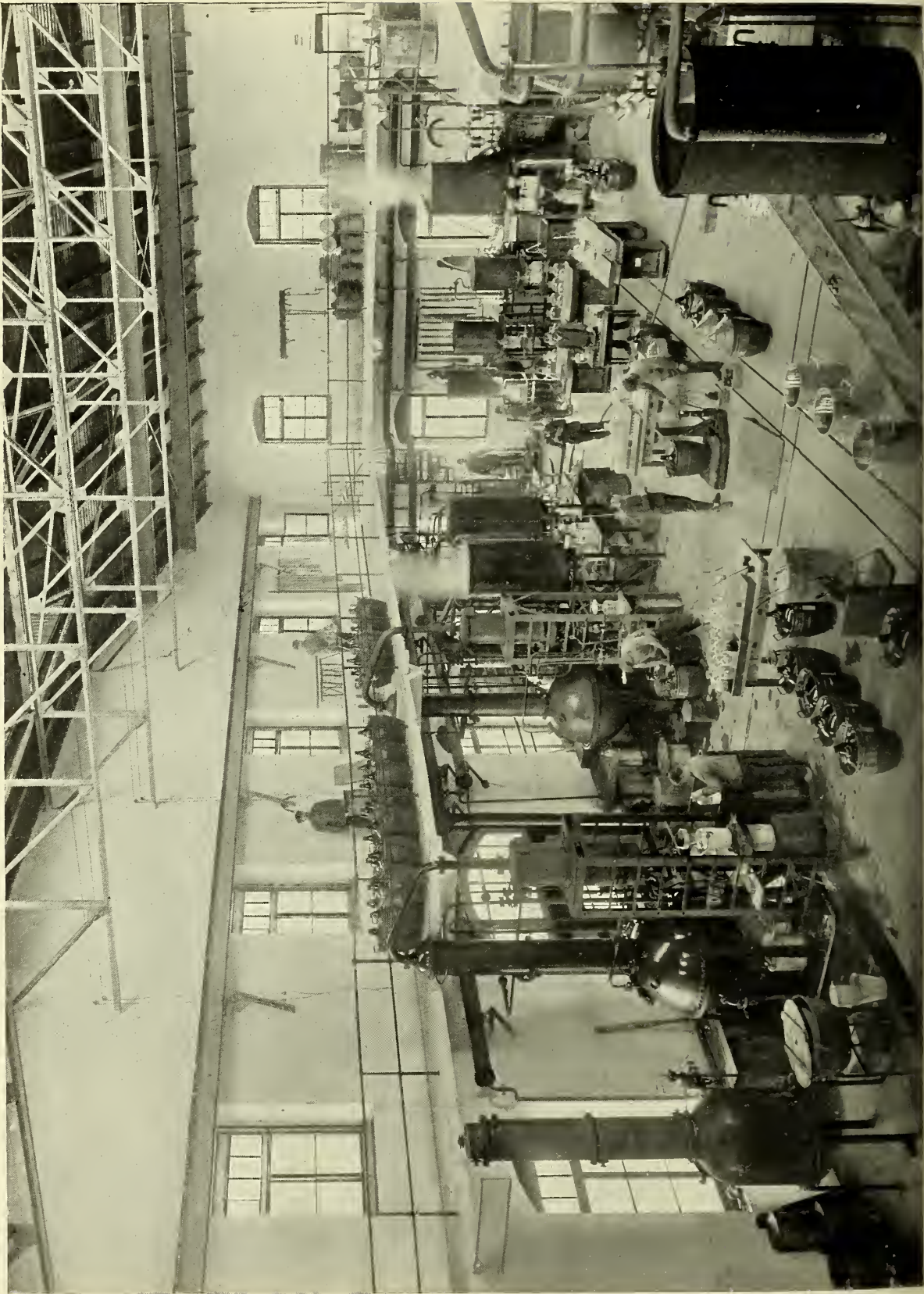


Engine room of Gröba.

gh at the rate of 12 cbm per minute; a quantity which would be sufficient to supply a medium sized town.

The raw materials arriving by rail are brought alongside the warehouse and conveyed to the several departments. The various kinds of wood and seeds are treated by special machinery in the warehouse to prepare them for distillation. The wood is passed through rasping and integrating mills, while the seeds are crushed between rollers. Everything, with the exception of conveying the raw material to the mills and removing the bags filled with the prepared material, is done automatically. These bags are conveyed to the distillery, which, owing to its vast dimensions makes a great impression upon the visitor. In this room, which has a floor surface of 1200 sqm and is 12 m in height, there are 50 stills of a capacity of 1000 to 2,000 Litres. Prominent amongst these are the great sandal-wood stills in which last year over 10,000 kg of sandal-wood were distilled, worth about 1½ million Marks at the present market price. In an adjoining room there are large steam-heated drying apparatus, in which the exhausted seeds are dried before being sold as cattle food. Crossing a wide street, the chemical department is reached, which consists of a square block of buildings, surrounding a yard. On the eastern side there is a shop somewhat smaller, but considerably higher, than the one described above, with a travelling crane traversing the entire width and greatly facilitating the attendance and feeding of apparatus. Artificial odorous substances such as benzylacetate, eugenol, geraniol, heliotropine, the artificial violet scent called Viodoron and many others are manufactured in this building. In a side wing are various auxiliary machines, such as ice-machines, centrifugals, etc.





Part of Chemical Department, Croba.





Another view of Chemical Department, Gröba.

In a small detached building without windows, there is a storage room for inflammable solvents of which large stocks are required and below this is the ice-cellar. In another large building, are the vacuum stills in which a number of products are finished off ready for the market. An adjoining building contains the laboratories which are equipped with the most modern technical and scientific auxiliaries. In the large halls communicating with the boiler-house, are the machine shops, provided with up-to-date machinery and tools, where 17 men are employed upon the construction of new and the repairing of old apparatus.

A special hospital room, equipped with all requisites for first-aid, is provided for accidents. — Refreshment rooms adjoin the various machine and other shops.\* A colony of villa residences for officials and workmen is in course of construction near by and the pretty houses which are all surrounded by gardens, will become an ornament to the locality.

Other arrangements in the works are also noteworthy, fire-hoses, Perkeo-fire extinguishers, sheets, etc. are everywhere provided and a fire-brigade is being organised. All workrooms and offices are connected by telephone and provided with clocks.

The factory's waste water after passing through special clearing pits is run into the Elbe.

The block of buildings described above is completed by sheds for the storage of acids, packing material, bicycles and a motor garage.

The extensive grounds belonging to the factory but not yet built upon are being utilised in the meantime as experimental plantations. — The Violets grown there furnish a remarkably fine extract especially adapted for scientific research on account of its full bodied and sweet scent. A number of other experiments of a like character, have also been very successful. —

The principle upon which the enterprise is worked, is the replacement of manual labour wherever possible by mechanical power, reducing the former to a minimum, so that only a comparatively small number of hands are required to keep this extensive plant going.







Works laboratory, Gröba.



Sandal-wood stock-room of Gröba.



Boiler House at Gröba.









# A trip round Africa

by  
*Mr. John C. Hewlett*



Victoria Falls, from Livingston Island.



Trolley at Victoria Falls.



Acacia Trees, Victoria Falls.

PLEASURE-TRIPS round South Africa will not be very numerous for some time to come, so that Mr. John C. Hewlett is fortunate in having concluded his in time to return by Marseilles and Paris before trans-Continental travel was stopped. Mr. Hewlett is fond of

the *Edinburgh Castle* on March 7, and reached Cape Town on March 24. It is about five years since he was out there, and he found distinct improvements. Hundreds of pretty houses are springing up all round Cape Town in the pine-woods, within easy reach of the train. Mr. George



1. RHODES'S TOMB, MATOPOS.
2. VICTORIA FALLS GORGE.
3. S. CATARACT, VICTORIA FALLS.

4. ZANZIBAR. (Curry-powder drying in foreground.)
5. NATIVE HUT NEAR THE CLOVE FIELDS, ZANZIBAR.
6. STREET, PORT SAID.

travel. His trips to South Africa are not business pure and simple, because when there he takes no orders, merely calling to shake hands with old friends and the customers of Messrs. C. J. Hewlett & Son, Ltd., Charlotte Street, London, E.C. On this occasion he left Southampton by

Darroll (Cleghorn & Darroll) and Mr. George R. Cleghorn, President of the Pharmaceutical Society of Cape Colony and a member of the Pharmacy Board, were among those whom he met.

From Cape Town Mr. Hewlett visited Muizenburg,



Stellenbosch, and Caledon, meeting Mr. Davies at the last-named place, which is a health-resort. Then he renewed his acquaintance with Kimberley, and from there took train to Bloemfontein, and after another night's journey arrived at Johannesburg, also visiting Boksburg, Benoni, Springfontein, Krugersdorp, Randfontein, Germiston, and Pretoria, where he much admired the new Union Government Buildings. After a busy fortnight in Johannesburg, Mr. Hewlett went up-country, by way of Bulawayo and Matopos, to visit the Victoria Falls. At Bulawayo Mr. Hewlett was met by Mr. Copley, of Smart & Copley, who drove him in his car to his private residence, where Mr. Copley has laid out a lovely garden, which Mr. Hewlett thinks is one of the best in South Africa. Rhodesia might be a floral paradise if it had more rain. Mr. Copley is one of those who believe in irrigation, and has a windmill-pump for the supply that waters his garden. There is a very good road from Bulawayo to Matopos, where Cecil Rhodes lies, and that was one of the trips which Mr. Copley and Mr. Hewlett had.

The railway between Bulawayo and the Victoria Falls is through dusty Bechuanaland country, and somewhat monotonous, but the traveller is well rewarded when he arrives at the hotel, situated in a spot looking right on to the railway bridge which spans the gorge, and from where one gets one's first view of this magnificent avalanche of water. Mr. Hewlett has seen Niagara, but he says that it is not a patch upon the Victoria Falls. Canoeing on the Zambesi above the Falls is delightful, and four stalwart blacks paddled Mr. Hewlett three miles to the landing-place for Livingstone, which is another three miles away, where he called on his old friend, Mr. L. F. Moore, who is "monti" (medicine man) to the natives. Returning south, Mr. Hewlett visited Pietermaritzburg and Durban, catching the R.M.S. *Gascon* at the latter place for the homeward journey by the East Coast, calling at Delagoa Bay, Beira, Chinde, and Mozambique. At Beira the only means of travel is a narrow-gauge trolley run by a man, and the central picture in the heading shows Mr. Hewlett sitting in the one that he travelled by—the side pictures are from Smart & Copley postcards. Continuing the journey past Port Amelia, the *Gascon* arrived at Zanzibar, with its delightful mixture of Indian, Portuguese, and Arab inhabitants. There Mr. Hewlett took a number of pictures. He was particularly struck by two big piles of yellow powder lying in the street (see No. 4 picture), and learned that it was curry-powder put out to dry after being ground. He also visited the clove-fields, but it was early days so far as the crop is concerned. From Zanzibar the journey was continued to Kilindini, which is the port for Mombasa, and the railway journey up to Nairobi of thirty-three hours each way was found to be most interesting, particularly when such game as lions, giraffes, hyenas, hartebeestes, springboks, zebras, and the like were seen. Mr. Hewlett called at Mr. Wardle's fine pharmacy in Mombasa for a few minutes, as there was little time to spare, for a steamer waited to take the party on to Aden. Then he went straight on through the Red Sea and the Suez Canal, arriving at Port Said, whence the steamer continued, calling at Naples, then through the Straits of Messina on to Marseilles, this concluding what Mr. Hewlett regards as the most interesting thirty-three days' voyage that he has ever had.

**BURGLARY.**—The premises of Norton & Co., English chemists, Cairo, were broken into recently, and the contents of the till stolen. Fortunately, the thieves were captured just as they were decamping.

**RABELAIS** practised medicine for two years in Lyons. An old account-book of the Hôtel Dieu, at Lyons, shows that a "new doctor" entered on his duties on November 1, 1432, and was named "François Rabellet" (orthography was not exact in those days). He was "passing rich on forty pounds a year," was boarded, lodged, and allowed to carry on private practice. He opened a sort of dispensary of his own, and treated gout, scrofula, and other cases by what we should now call "Turkish baths." When his remedies failed to act, we are told, the worthy doctor would cheer up his patients with what he called his "Pantagruelic mythologies and Gargantuan chronicles. . . . Many patients, languorous, ill, or otherwise depressed, thus forgot their troubles, passed the time joyously, and received cheerfulness and consolation."

## British Medical Association.

### Discussion on the Drug Tariff.

**N**OT many subjects directly affecting chemists were discussed at the annual meeting of the Association in Aberdeen last week. Towards the end of the meeting of representatives of divisions, which occupied the first four days of the meeting, Dr. Wallace Henry, of Leicester, a leading member of the Association, introduced a motion on the question of drugs in connection with the Insurance Act. He proposed:

That this meeting instructs the Council of the Association to urge upon all Panel Committees the necessity of availing themselves of their rights under the Regulations to make a careful investigation of chemists' accounts, and to make a full report to the Insurance Committee of all cases of complaints made by the Pharmaceutical Committees respecting excessive and extravagant prescribing.

Dr. Wallace Henry expressed the opinion, based on conversations during the meeting, that doctors generally do not realise the importance and urgency of the drug question in connection with the Insurance Act. He said it is causing a great deal of friction between all concerned, and the resolution was brought forward in the hope that it would induce members who might be on Panel Committees to take action. Panel Committees should not wait until a complaint is laid, he said, but should ask that chemists' accounts be submitted to them. If the accounts were examined carefully the eyes of the medical profession would be opened to the iniquity of the present Drug Tariff. The suggestion that there should be a flat rate for pills, tinctures, etc., was preposterous, he added. The Tariff entitles chemists to charge unreasonably high prices for pills and many other items. If the facts were brought before Insurance Committees a great deal of the prejudice being aroused against the medical profession on the ground of excessive or extravagant prescribing would be removed, and it would be shown that the number of well-founded complaints under that head is infinitesimal. Of the prescriptions sent to the Panel Committee by the Pharmaceutical Committee in Leicester not more than half a dozen could reasonably be described as extravagant.

Dr. Rowland Fothergill (Brighton) declared that although there were squeals from the chemists the amount of money they were putting away made his mouth water.

Dr. Mark R. Taylor (West Cornwall) said his division had been considering how the Drug Tariff might be cut down; his own feeling was that spirituous tinctures should be eliminated, although chemists told him this could not be done without infringing the Food and Drugs Acts.

The motion was carried unanimously.

### IN THE SECTION OF MEDICAL SOCIOLOGY

On July 30 an illuminating discussion took place on "A State Medical Service *v.* A Panel System." The remarkable feature of the debate was the unanimity with which speaker after speaker praised the working of the Panel system, and even those who, a year ago, were strong supporters of the State medical service idea admitted that they had modified their views. A warning note was sounded by medical speakers who felt that the profession should realise that it could not expect to be invited to undertake the treatment of dependants on the present terms; the finances of the country could not bear the strain. They urged that the policy of the profession in this matter should be adumbrated at an early stage. Sir David McVail, Vice-Chairman of the Scottish Insurance Commission, warned doctors of the impropriety of glossing over diseases of misconduct in giving certificates, or of allowing an insured person to have a single day's Sickness Benefit beyond that to which he was entitled. The Chairman of the Aberdeen Insurance Committee urged that panel practitioners should make themselves responsible for disciplinary measures in respect of their fellows, especially in regard to unduly large numbers on individual lists. He also urged that practitioners should group themselves and lay out a proportion of the money received from the Insurance Fund in providing adequate waiting-room accommodation and the services of a nurse, clerk, and dresser.



# Insurance Act Dispensing.

A Weekly Record of events and decisions concerning Chemists' interests in Medical Benefit administration and practice.

## Reports from Local Centres.

With special reference to the supply of medicines and appliances. See also Association Affairs.

### ENGLAND.

**Bath.**—At a meeting of the Insurance Committee on July 30 a letter was read from the Pharmaceutical Committee asking that, in view of the deficiency on the Drug Fund for 1913, permission be granted to scrutinise the prescriptions, so as to put into operation Clause 40 of the Regulations. The number of insured persons on each doctor's list and the number of patients attended by each doctor were also requested for the purpose of making a proper analysis. After some discussion it was agreed that permission be granted and the information supplied on the understanding that it be not published.

**Berkshire.**—The Chairman of the Finance Sub-Committee, in presenting his report, stated that 1,691*l.* 19*s.* 6*d.* had been paid to doctors and 2,017*l.* 4*s.* 7*d.* to chemists in respect of drugs supplied during 1913, leaving a balance on the Drug Fund of 272*l.* 2*s.* 2*d.*

**Bolton.**—The Insurance Committee on July 30 re-appointed Alderman J. T. Cooper Chairman and Councillor Percy Knott (chemist and druggist) Vice-Chairman. Mr. Knott was also reappointed a member of the Medical Benefit Sub-Committee, and Mr. W. R. Blain, Ph.C., was reappointed to the Sanatorium Sub-Committee. Chemists have been paid 66.66 per cent. of the amounts of their accounts for the quarter which ended on July 11. The deficit for the year July 1913 to July 1914 amounts to 29.39 per cent., and the deficit for the first quarter of 1914 to 41.24 per cent. The charges on the Drug Fund for the first quarter of 1914 amounted to 2,878*l.* 15*s.* 8*d.*, and for the second quarter 1,941*l.* 10*s.* 7*d.*—i.e., 4,820*l.* 6*s.* 3*d.* for the six months, against 3,382*l.* available. Accounts amounting to about 150*l.* have not yet been sent in.—The Pharmaceutical Committee have appointed Mr. Herbert Knott Chairman and Mr. Massey Secretary.

**Cambridgeshire.**—The Finance and General Purposes Committee reported to the Insurance Committee on August 1 the receipt of a letter from the Commissioners consenting to provisional payments being made to the Pharmaceutical Committee of such amounts as may from time to time be required by them for administrative expenses. It was also reported that the Panel Committee had decided to make a levy on all panel doctors with twelve names and over on their lists for their expenses.

**Canterbury.**—It was resolved, at a meeting of the Insurance Committee on July 23, to write to the Commissioners pointing out that for 1913 credit had been received for only 6,000 insured persons, while the index slips showed a mean of 6,400, and to draw the attention of the Commissioners to the hardship involved to chemists and doctors (see *C. & D.*, July 11, p. 56). The Chairman stated that he had written a strong letter of protest to the Commissioners with reference to the chemists' accounts, but had so far only received a formal acknowledgment. He would again write them on the subject. The Committee acceded to a request by the local chemists that all prescriptions for the past year should be sent to the Pharmaceutical Society for analysis, provided the Commissioners approved and that the prescriptions were returned intact and unspoilt.

**Cornwall.**—The new Pharmaceutical Committee met on July 31, when Mr. Cannon (Penzance) was re-elected Chairman, Mr. A. J. Roberts (Truro) Vice-Chairman, and Mr. W. T. Hall (Truro) Secretary. It was decided to apply to the Insurance Committee for a provisional grant towards the administrative expenses. Mr. Hocking (Falmouth) was elected to fill a vacancy on the Committee. Messrs. Gee (Redruth), Roberts, and Cannon were nominated for the Pharmaceutical Service Sub-Committee. A long discussion took place with reference to the state of the Drug Fund, and in view of last year's deficiency it was decided to authorise the Secretary to take steps to get a scrutiny of last year's prescriptions. An executive committee, consisting of Messrs. Cannon, Stephens, and Bond, was appointed to deal with emergency matters.

**Croydon.**—The new Pharmaceutical Committee met on July 31. Mr. R. L. Griffiths was elected Chairman and Mr. Dickinson Secretary. Messrs. Griffiths, Dickinson, and Cooper Neve were nominated as members of the Pharmaceutical Service Sub-Committee, and Messrs. Griffiths and Cooper Neve as members of the Joint Services Committee.

**Devonport.**—The Medical Benefit Sub-Committee recommended to the Insurance Committee on July 23:

That the representatives of this Committee on the National Association of Insurance Committees be requested to raise the question of inspection of the quality and quantity of the medicines supplied to insured persons with a view to provision being made in any amending Bill of the National Insurance Act.

After discussion the recommendation was referred back to the Sub-Committee on the ground that no chemists were present at the meeting of the Sub-Committee when the recommendation was passed.

**Dudley.**—It was reported to the Insurance Committee on July 24 that the number of insured persons on the Committee's lists is now over 18,000, and that the number of doctors on the panel has increased from twenty-five to twenty-nine. During the first quarter of 1914 1,337*l.* was paid to chemists for 9,232 prescriptions, an average of 6.3*d.*, and 11,954 prescriptions were made up during last quarter at an average cost of 7.3*d.*

**Durham County.**—At a meeting of the Insurance Committee on July 23 the Clerk reported that the number of prescriptions dispensed by panel chemists during the quarter ended April 11 was 146,973, at a total cost of 5,428*l.* 4*s.* 3*d.* and an average cost of 5.864*d.* The amount available for the payment of chemists was 4,500*l.*, excluding the Drug Suspense Fund.

**Essex.**—The new Pharmaceutical Committee met at River Plate House, Finsbury Circus, London, on July 29, when the following officers were elected: *Chairman*, Mr. J. H. Matthews; *Vice-Chairman*, Mr. T. England; and *Secretary*, Mr. C. Goode; *Pharmaceutical Service Sub-Committee*, Messrs. Matthews, Slater, and Freeman; *Executive Sub-Committee*, Messrs. Matthews, England, and Rundle, to whom powers were given to act in any emergency not affecting the policy of the Committee. Items of expenditure were brought forward and sanctioned, and arrangements were made for controlling the same. A report of the Medical Benefit Sub-Committee was presented drawing attention to the considerable increase in the number and cost of prescriptions during the first two quarters of the current year as compared with the corresponding periods of 1913. The increases were 71,984 in number, 4,334*l.* in cost, and 1.26*d.* per prescription. The following recommendation was adopted:

That the Sub-Committee when appointed to superintend the checking take the matter up; in the meantime, that the Secretary communicate with each panel chemist in order that each may bring the position to the personal notice of any medical man with whom he may come in contact.

It was felt that by so doing much could be done to remedy what will otherwise prove an unsatisfactory ending to the year. Mr. Goode reported that he had been appointed the previous day, at the meeting of the Essex Insurance Committee, to serve upon the Medical Benefit Sub-Committee.

**Gloucestershire.**—The Chairman of the Insurance Committee reported on July 25 that there were 105,069 insured persons in the county, representing 31 per cent. of the population. The number of chemists at present on the panel is eighty-four, representing ninety-seven shops. Chemists have dispensed in the first medical year 130,000 prescriptions at an average cost of 7.5*d.* It was reported to the Committee on July 27 that panel chemists had been paid 1,218*l.* 2*s.* 6*d.* on account, leaving 27*l.* 3*s.* 8*d.* in the Drug Fund. Chemists' checked accounts for 1913 amounted to 1,455*l.* 8*s.* 1*d.*, thus showing a Drug Fund deficit of 210*l.* 1*s.* 11*d.*

**Hull.**—The Sub-Committee of the Pharmaceutical Service Committee has reported to the Insurance Committee that at a meeting held to consider a complaint against a firm of chemists on the panel it found that—

1. On May 27, 1914, a prescription was presented to the chemists for one belladonna kidney-plaster.
2. That the plaster was supplied by a person who was not eligible to serve under the agreement with the Committee.
3. That the plaster was supplied in an untrimmed condition.
4. That the person who supplied admits (a) negligence in serving, (b) the untrimmed condition of the plaster, and expresses regret at the article being sent out in such a condition.

Upon these findings the Sub-Committee recommend that a copy of the findings be forwarded to the firm who supplied the plaster, and that they be informed that "this Committee views with grave alarm the want of adequate superintendence, and insists on an assurance that such irregularities will not occur again."—The Kingston Surgical Co., Ltd., has joined the panel for the supply of appliances only.

**Liverpool.**—The new Pharmaceutical Committee met at the Royal Institution on July 29, when the following officers were elected: Mr. J. Bain, Chairman; Mr. W. H. Clubb,



Vice-Chairman; and Mr. G. V. C. Last, Secretary. Messrs. J. Bain, J. L. Hirst, and L. M. Parry were nominated as members of the Pharmaceutical Service Sub-Committee. The Secretary reported on a case where a Liverpool chemist had presented several prescriptions written by a local doctor on Liverpool forms, but bearing addresses in Bootle. The Liverpool Insurance Committee declined to pay, as the insured persons were resident in Bootle. The Bootle Insurance Committee refused to pay as they had no agreement with the chemist. On investigation it was found that these persons had been resident in the Liverpool area at the beginning of the year, and after considerable delay payment had been made for the prescriptions. A letter was received through the Insurance Committee from a person on Part 2 of the Panel (not entitled to dispense), from whose account the Pharmaceutical Committee had disallowed twenty prescriptions of the total value of 17. 3s. 9½d., stating that "he had not understood the meaning of the word 'dispense,'" and requesting that the Pharmaceutical Committee should reconsider his case; but it was pointed out that the Insurance Committee could not necessarily pay for prescriptions dispensed by him, whether the Pharmaceutical Committee desired it or not. A letter was read from a chemist complaining of a doctor who: (1) Occasionally wrote prescriptions on paper other than the official forms; (2) frequently directed his patients to go only to a particular chemist; and (3) used private formulæ, the composition of which is known only to this particular chemist. Several members of the Committee confirmed the complaints from personal experience, and it was decided to refer the letter to the Joint Services Sub-Committee.—The Insurance Committee is paying 95 per cent. of the chemists' accounts for the quarter ended July 11, and it is understood that the cheques will be sent out this week. There is a slight balance in hand for the past quarter, but this will not meet the deficit of 2,000l. on the first quarter of the year, when 75 per cent. of the chemists' accounts was paid.

**London.**—Mr. Geo. A. Tocher (Secretary of the London Pharmaceutical Committee) informs us that the drug accounts for 1913 have not been fully paid by the Insurance Committee, who are waiting for the final audit. The doctors have not received anything of the floating sixpence, and it is expected that the final discount of the drug accounts will be about 5 per cent.

**Manchester.**—The new Pharmaceutical Committee met on August 5, when the following gentlemen were appointed officers for the term of office: Mr. F. W. Bates, Chairman; Mr. Harry Kemp, Vice-Chairman; Mr. G. A. Mallinson, Hon. Secretary; Mr. W. H. Delve, Hon. Treasurer. Mr. Bates, Mr. W. H. Delve, and Mr. Joseph Bell were unable to be present. The business of the meeting was purely formal owing to the absence of so many members.

**Oxford.**—A report recently issued by the City Pharmaceutical Committee states that 9,605 Insurance prescriptions were dispensed during the quarter ended July 11 at a cost of 305l. 6s. 9d. and average of 7.64d. per prescription, compared with 8.68d. in the previous quarter. Sanatorium Benefit prescriptions numbered eighty-nine, and cost 9l. 4s. All have been paid in full. The pharmacists appointed to serve on the Pharmaceutical Service Sub-Committee are Alderman C. Clayton, Mr. H. C. Goodall, and Mr. H. O. Oddy; and Alderman C. Clayton and Mr. H. C. Goodall have been appointed to the Joint Services Sub-Committee.—Mr. H. C. Goodall has been elected Vice-Chairman of the Insurance Committee.

**Oxfordshire.**—During the quarter ended July 11 7,112 Insurance prescriptions were dispensed at a cost of 233l. 10s. 2d. and an average cost of 7.88d. These do not include the accounts of four pharmacists which were not rendered in time. Mr. A. E. Fox (Banbury), Mr. H. C. Goodall (Oxford), and Mr. W. T. Ransom (Witney) have been appointed to serve on the Pharmaceutical Service Sub-Committee, and the two first-named on the Joint Services Sub-Committee.

**Salford.**—The Insurance Committee met on July 30, when the Clerk announced that the total claims in respect of prescriptions dispensed from May 1 to May 31 was 606l. 13s. 2d.; from January 12 to April 30, 3,081l. 10s. 6d.; together 3,688l. 3s. 8d. The money available to meet this is 3,260l., which enabled 88 per cent. to be paid, 2,526l. 16s. having already been paid on account. An order for payment of 717l. 8s. 11d. was now submitted to the Committee, making a total paid of 3,244l. 4s. 11d., and leaving an unpaid balance of 443l. 18s. 9d. Compared with April 1913, there was a decrease in the Drug Account of 344l. 1s. 1d.; 14,702 patients were treated during the month at an average cost per patient of 9.9d. for drugs. The number of prescriptions was 29,706, and the average cost per prescription was 4.9d.

**Sheffield.**—The Panel Committee informed the Insurance Committee on August 5 that they have decided not to apply for a grant towards their expenses, but have adopted a scheme of voluntary contributions by panel practitioners. The Committee were asked to deduct from moneys payable to practitioners ½ per cent. of such moneys in accordance with individual requests submitted. The Committee also asked for an advance of 50l. for immediate expenses. The Committee resolved that the scheme be agreed to, subject to the approval of the Commissioners, and that the deductions be made annually.—The Pharmaceutical Service Sub-Committee have reported on a complaint which had been forwarded by a medical practitioner on behalf of an insured person, alleging that a prescription given by the practitioner had been wrongly dispensed, and thereby had caused great suffering to the insured person, and necessitated a consulting physician being called in. The evidence showed that liquor ammoniac had been included in the medicine in place of water, and also that a wrong label had been placed upon the bottle, which did not bear the chemist's name. The chemist admitted that he had made a mistake, stating that the error had arisen owing to the fact that he was removing to another address, and his stock was disarranged. He greatly regretted the suffering which had been caused to the insured person, and had compensated him, in addition to paying the special medical expenses which had been incurred. The insured person stated that he was fully satisfied that the chemist had not intended any harm, and he wished to withdraw the charge. It was decided that the chemist was guilty of gross carelessness, and recommended that he be severely censured. The Clerk was instructed to forward a number of prescriptions which appeared to constitute an excessive demand upon the Drug Fund to the Panel Committee, requesting that the circumstances be investigated. A letter from the Pharmaceutical Committee objecting to the prescribing of medicines by the panel practitioners by number, and pointing out the great danger of errors occurring, was referred to the Panel and Pharmaceutical Committees to report thereon. The following payments were ordered to be made by the Finance Committee:

The sixth payment to chemists for the month ending July 11 in respect of 75 per cent. of accounts rendered, 845l. 19s. 10d.

Payment to certain medical practitioners as 75 per cent. of accounts rendered for the quarter for emergency dispensing and first dressings, 14l. 9s. 5d.

Payment in respect of 75 per cent. of accounts for the initial stock of appliances, etc., to be held by the medical practitioners, 25l. 13s. 4d.

**Shropshire.**—The Insurance Committee on July 25 again considered the question of the amount to be paid to chemists for the quarter which commenced on January 12, in view of the great increase in the accounts compared with the corresponding quarter of 1913. It was decided to adhere to the resolution to pay 90 per cent. on account passed at the last meeting. A balance of 124l. 7s. 6d., due to the Shrewsbury Dispensary for 1913, was ordered to be paid.

**Somerset.**—The Finance Committee reported to the Insurance Committee on July 25 that the sum paid to chemists and doctors doing their own dispensing amounted to 8,772l. 17s. 5d. for 1913, or 1s. 8.05d. per insured person.

**Yorkshire (East Riding).**—The new Pharmaceutical Committee met on July 28, when Mr. Brown (Hessle) was reappointed Chairman and Mr. P. Hawkins Secretary. A letter was read from the Insurance Committee asking that arrangements might be made to ensure the supply of medicines, etc., at all reasonable hours at one or more of the places of business of chemists. The Secretary was instructed to reply that, in their opinion, ample facilities were already in existence, and to draw up a detailed report. Complaints had been received that deductions were made from chemists' accounts in respect to prescriptions issued to persons not on the panel lists, and the doctors in question were asked to refund the amounts to the chemists. The Committee passed a resolution to this effect.

**Yorkshire (West Riding).**—A statement submitted to the Insurance Committee on July 31 showed that the Drug and Drug Suspense Funds for 1913 amounted to 49,818l., of which 44,624l. has been paid, and a balance due of 320l. is now to be paid. This leaves a balance of 4,873l. for division among panel practitioners. The minutes contained reference to a letter which had been forwarded to the Commissioners, asking whether a practitioner may carry on the business of a chemist by means of a qualified chemist as his agent. The Commissioners had replied that, in accordance with the Medical Benefit Regulations, the chemist is entitled to be placed on the panel. The matter was referred back to the Sub-Committee for consideration. A resolution was passed to the effect that a circular be issued to doctors on the panel pointing out the objections to



contractions, such as "Rep. mist.," being used in prescriptions, and asking them in future to write out prescriptions in full.

### SCOTLAND.

**Aberdeenshire.**—The Insurance Committee have issued a statement, from which it appears that the total provisional credit at January 11, 1914, was 14,437*l.* for 1913. The income of the Drug Fund during the same period was 2,393*l.* 1*s.* 6*d.*, of which 2,033*l.* 8*s.* was paid to chemists and 325*l.* 5*s.* 9*d.* to dispensing doctors at the rate of 1*s.* 6*d.* per head, leaving a balance of 34*l.* 7*s.* 9*d.* The Drug Suspense Fund shows a balance of 689*l.* 5*s.* 5*d.* due to the non-dispensing doctors.

**Edinburgh.**—At a meeting of the Insurance Committee on July 30 it was reported that prescriptions for the month to April 11 numbered 17,457, of which 13,186 were checked, the average cost being 11*d.*, compared with 11*d.* and 11*d.* the two previous months. The average at the beginning of last year was 8*d.* only. The amount claimed was 829*l.* 16*s.* 8*d.*; the amount allowed, 823*l.* 7*s.* 7*d.* Among items disallowed were two pots, value 2*s.* 4*d.*, of Wright's compound camphor ointment, and five tubes of "Phylacogen," value 1*l.* 8*d.* each, or about 3*l.* in all, ordered for one patient in three days. The checker in his report suggested that the prescriptions should be scanned, with a view of ascertaining if doctors were exceeding the *per capita* grant and to take what steps were found necessary. The estimated expenditure on the Drug Fund for the half-year to July 11 amounts to 4,892*l.*; the balance carried forward to the Drug Fund from 1913 is 206*l.* 16*s.* 5*d.*; and the estimated payments for the half-year amount to 4,507*l.*

**Stirling.**—The County Insurance Committee agreed last week to pay panel chemists a bonus of 10 per cent. on their 1913 accounts.

### WALES.

**Carnarvonshire.**—A report presented to the Insurance Committee on July 24 stated that for 1913 twenty-one panel chemists were paid 369*l.* 16*s.* 1*d.*, the individual payments ranging from 13*s.* 11*d.* to 85*l.*

## NEW BOOKS.

Any book published in the United Kingdom can be supplied to our subscribers at the price quoted. Orders, with remittance, should be sent to the Publisher, 42 Cannon Street, London, E.C.

Bennett, Reginald R., B.Sc., F.I.C., Ph.C. *Medical and Pharmaceutical Latin for Students of Medicine and Pharmacy: A Guide to the Grammatical Construction and Translation of Physicians' Prescriptions, including Extensive Vocabularies and an Appendix upon Foreign Prescriptions.* Second edition. 7x4½. Pp. xiv+443. 6*s.* 6*d.* net. (J. & A. Churchill.) [This book is the successor of Pereira's "Selecta e Prescriptis," first published ninety years ago, and the eighteenth or last edition in 1890, after which Mr. Bennett produced the first edition of "Medical and Pharmaceutical Latin" for the publishers of "Selecta," adopting Pereira's plan and adapting the old matter to modern conditions and circumstances. The first edition (1906) has given general satisfaction, and the author has taken the opportunity of a resetting of the book to rearrange several sections, to replace old formulæ with more modern prescriptions, and to elaborate the vocabularies. Many improvements are obvious and, though small, notable—e.g.:

#### Formerly.

Recipe	[Take (of)
Acidi Phosphorici Diluti,	[Diluted Phosphoric Acid,
As above.	Now.
	[Take
	[Of Diluted Phosphoric Acid,

The new style applies to all the items in a prescription, the preposition being used wherever it is necessary, and not placed simply as a superscription as before.]

Clarke, H. T., D.Sc., F.I.C. *An Introduction to the Study of Organic Chemistry.* 7½x5. Pp. 492. 6*s.* 6*d.* (Longmans, Green & Co.) [This book is well bound in purple-cloth cover. It contains thirty-seven chapters covering the new syllabus (1912) of the lower examination in organic chemistry in the Board of Education examinations in science and technology and the needs of candidates for the medical examinations in this subject. A useful summary is appended, and a number of problems from examination papers are given.]

## TRADE-MARKS.

The figures in parentheses refer to the classes in which the marks are grouped, for a list of which, with particulars as to registration, see "The Chemist and Druggist Diary," 1914, p. 237.

Objections to the registration of any of the undermentioned applications must be stated on Form T.M. No. 7 (obtainable at Money Order Offices for £1) and lodged with Mr. W. Temple Franks, Comptroller-General, Patents Office, 25 Southampton Buildings, Chancery Lane, London, W.C., within one month of the dates mentioned.

(From the "Trade-marks Journal," July 15, 1914.)

"ONE ELM," with picture of same; for goods (42). By F. Kendall & Son, Ltd., Birmingham Road, Stratford-on-Avon. 360,328.

Circular label, with map of New Zealand and words "THE PLACE WHERE GLAXO IS MANUFACTURED," and square labels; for an infants' and invalids' food made in New Zealand (42). By J. Nathan & Co., Ltd., 88 Gracechurch Street, London, E.C. 361,700.

Diamond-shaped device, with words "SPARKLING PURITIZER"; for mineral and aerated waters, etc. (44). By Reynolds & Branson, Ltd., Leeds. 360,448.

"TAEF"; for all goods (47). By A. Keartland, The Central Garage, Colwyn Bay. 361,496.

"WHITE HORSE," with picture of same; for perfumery, etc. (48). By E. Cook & Co., Ltd., Bow, London, E. 360,881.

"SILOX"; for teeth and mouth preparations (48). By G. H. Seward, 12 Batterssea Rise, Clapham Common, S.W. 359,680.

"FRANCESCA"; for perfumery, etc. (48). By the Erasmio Co., Ltd., Warrington. 360,506.

"RESIDIA"; for toilet-preparations (48). By C. Rigola, 98 Old Christchurch Road, Bournemouth. 360,979.

"ENTOUTCAS"; for toilet-articles (48). By Dr. Max Lehmann & Co., 26 Dreibundstrasse, Berlin, S.W. 361,034.

"SEVANE"; for toilet-articles (48). By E. C. Van Essen, "Echlinville," The Avenue, Grove Park, Lee, S.E. 361,416.

"ORLEX"; for a hair-preparation (48). By F. A. Gray, 421 Dwight Building, 10th Street, Kansas City, U.S.A. 361,624.

"BARSIDE," "PHELACTINE," "STYMINOL," and "TAMMALITE"; for perfumery, etc. (48). By Dearborn, Ltd., 32 and 34 Theobald's Road, London, W.C. 361,895/6, 361,897/8.

"ENTENTE CORDIALE"; for hair-ornaments (50). By Kleemann Bros., 46 and 47 Redcross Street, London, E.C. 361,705.

(From the "Trade-marks Journal," July 22, 1914.)

"SYLO"; for freezing mixtures (1) and for refrigerators, etc. (50). By A. C. Shoppee, Pancras Street, London, W.C. 361,306/7.

"STOMAN," for all goods (2 and 48); label device with word "STOMAN," etc., for medicated throat-tablets (3). By W. Osborne and L. Sensburg, 115 Clerkenwell Road, London, E.C. 359,567/8, 358,759.

"MARTELLIN," with device of hammer on shield; for chemicals (2). By Henkel & Cie., Heyestrass 67, Düsseldorf. 361,049.

Device of Imp's head; for chemicals (2). By T. Keating, 50 Union Street, Southwark, S.E. 361,627.

Facsimile signature "W. H. WEBB"; for animal-medicines (2). By W. H. Webb, 26 Nelson Street, Stroud. 362,020.

"TUDOL"; for a medicinal tablet (3). By H. S. Reeson, 32 Woolwich Road, Greenwich, S.E. 357,488.

"DELANOS RHEUMATIC CONQUEROR," with portrait of the late S. T. Delano; for a medicine (3). By the Delano Co., 207 East Jefferson Street, Syracuse, New York. 357,597.

Picture of broken drum, with words "CANNOT BE BEATEN" (wording disclaimed); for medicinal chemicals (3) and for perfumery (48). By Shirley Bros., Ltd., 4 Rockingham Street, London, S.E. 361,092/3.

"DENTOLDS"; for all goods (3). By the Dental Manufacturing Co., Ltd., Newman Street, London, W. 360,304.

Russian characters meaning "Lux," for medicinal chemicals (3), goods (47), and for perfumery, etc. (48); "CAMERA," for goods (47). By Lever Bros., Ltd., Port Sunlight. 361,285/6/7/8/9/90, 361,821.

"SULACUM"; for a medicine (3). By A. Wilkie, 61 Shandwick Place, Edinburgh. 361,599.



"CHINA GIRL," with picture of same; for bristles (4). By Dancy, Maguire & Co., 10 Bishopsgate Avenue, London, E.C. 361,076.

"DANJILL"; for instruments for the deaf (8). By D. & J. Hill, Lambert House, Ludgate Hill, London, E.C. 361,494.

"SALVUS"; for breathing apparatus (11). By Siebe, Gorman & Co., Ltd., 187 Westminster Bridge Road, London, S.E. 361,300.

Label with words "BARNET," "TEXTURE," "BROMIDE" ("Texture" disclaimed); for photographic-paper (39). By Elliott & Sons, Ltd., Park Road, Barnet, Herts. 360,501.

"CARVO"; for animal-food (42). By Shaw's Hull Malt Co., Ltd., 139 Wincolmlee, Kingston-upon-Hull. 360,137.

"COOLIE"; for beverage preparations (42). By C. Southwell & Co., Ltd., Jacob Street, Bermondsey, S.E. 360,789.

"NUTRIC"; for invalid-foods (42). By S. Henderson & Sons, Ltd., Stateford Road, Edinburgh. 360,847.

"AVALON"; for all goods (42). By Anderson & Colman, Ltd., 5 Philpot Lane, London, E.C. 361,216.

"OXYGINARIS" in facsimile writing; for mineral water (44). By O. G. Naris, Ltd., 75 Mayo Road, Willesden, N.W. 360,484.

"ICEBERG"; for mineral and aerated waters (44). By the Pure Water Co., Ltd., 274 Queen's Road, Battersea Park, S.W. 361,340.

"RAGTIME"; for mineral and aerated waters (44). By the Portdown and South Hants Mineral Water Co., Gosport Road, Fareham. 361,384.

"EBRAB"; for perfumery, etc. (48). By Société Anonyme L'Emulsior des Indes, 346 Rue Saint-Honoré, Paris. 362,193.

"AMULET"; for goods (47) and for perfumery, etc. (48); "RENDEZVOUS" and "TORTOISESHELL" for perfumery, etc. (48). By C. Thomas & Bros., Ltd., Broad Plain Soap-works, Bristol. 361,720/1, 361,559, 361,723.

"NEVER MISS"; for perfumery, etc. (48). By Vinolia Co., Ltd., 37/38 Upper Thames Street, London, E.C. 361,189.

"SAGELINE"; for all goods (48). By D. H. Elliott, 9 Park Way, Princes Road, Liverpool. 361,240.

"DENTITH"; for a preparation for cleaning artificial dentures (48). By F. Macrill, 44 Church Street, Marple, Cheshire. 361,478.

Picture of engine, with words "LA LOCOMOTORA ENGINE BRAND," for perfumery, etc. (48); "BALLOON BRAND," with picture of same, for polishes (50). By Hazlehurst & Sons, Ltd., 17 Highfield Street, Liverpool. 361,665, 357,670.

"ARROZEMA"; for perfumery, etc. (48). By Yardley & Co., Ltd., 105 Carpenter's Road, Stratford, London, E. 362,000.

"SNUFFIRE"; for a fire-extinguishing powder (50). By H. W. Umney, 46 King William Street, London, E.C. 360,657.

(From the "Trade-marks Journal," July 29, 1914.)

"MAXOL"; for a photographic developer (1). By B. J. Young, 20 Elm Hall Drive, Mossley Hill, Liverpool. 361,803.

"PELAN"; for chemicals (1). By C. Rosier, 22 Avenue d'Italie, Paris. 362,067.

"TRIBOLIC"; for disinfectant-soap (2). By M. P. Hunt & Co., Marsh Gate Lane, Stratford, E. 360,891.

"DISTEMPOIDS"; for veterinary chemicals (2). By J. Barker, 136 Evington Road, Leicester. 361,526.

"REDUCTIOL"; for medicinal chemicals (3). By Dr. C. Schindler Barnay, 4 Freisingergasse, Vienna I. 357,500.

"DIAL-CIBA"; for all goods (3). By Society of Chemical Industry in Basle, 141-227 Klybeckstrasse, Basle. 358,718.

"WHITCROSS," with picture of same; for embrocations, etc. (3). By Shirley Bros., Ltd., 4 and 4A Rockingham Street, S.E. 359,322.

"DOMIGO"; for a medicine for purifying the blood (3). By D. Doyle, G. Miller, and A. Goldfuss, 40A Pritchard Street, Johannesburg, S.A. 360,274.

Portrait of applicant, with words "CARL'S CORN CURE" ("Carl's" disclaimed); for a corn-cure (3). By C. Schweitzer, 250 Commercial Road, E. 361,172.

"ARTEROTONE"; for a medicine (3). By A. McLane Hamilton, 16 Victoria Street, S.W. 361,508.

"CRYSTEX"; for spectacles, etc. (8). By J. & R. Fleming, 136-142 Clerkenwell Road, E.C. 361,942.

## VETERINARY NOTES.

By a M.R.C.V.S.

### Joint-ill in Young Stock.

JOINT-ILL is a disease that causes a great mortality among young stock, owing to its highly infectious character. This disease affects foals, calves, and lambs equally, and is practically a form of blood-poisoning caused by the disease germs entering into the system through the severed navel cord and locating itself in the various joints, especially the knees and hocks. The symptoms are stiffness, followed by lameness and enlargement of the joints. Later, abscesses form and burst, leaving open joint and causing the death of the animal. Treatment is usually of no avail, and the very few that do survive present a weakly and thriftless appearance and are of no use either for feeding or breeding purposes.

Seeing that treatment is useless, attention must be directed to prevention. The food must be carefully examined and only that of first quality given. Scrupulous cleanliness must prevail as to the surroundings, fixtures, and utensils, as well as the accoucheur's hands, clothing, and instruments. Before the hands or instruments are inserted into the passage, they should be thoroughly disinfected, and when the young animal is born the navel-string should be ligatured with tape or string well saturated with a disinfectant and the surrounding parts dressed or painted with either tincture or solution of iodine for a few days. Antiseptics, such as sodium hyposulphite, sodium salicylate, potassium permanganate, or glycerin of carbolic acid, may be given internally. Should there be any appearance of the disease, isolate the healthy animals from those affected, and let there be different attendants for each section. Scour is due to similar causes, and by adopting the preventive measures outlined above the cases are reduced to a minimum.

### Lead-poisoning in Stock.

A FAIRLY common cause of poisoning in cattle, says the New Zealand "Journal of Agriculture," and to a less extent in horses, is the lead compounds used in paints. Animals obtain it by licking the paint from old paintings, or off freshly painted houses, and are positively attracted to the one spot in perhaps a comparatively large field where the partially dry paint is to be obtained, and will greedily consume it, so that a very limited amount of the poison will cause great damage, the mortality being very high. There is evidently something in lead paint which is particularly palatable to cattle. A case is quoted in which an old paint-tin left carelessly in a paddock was responsible for the death of nineteen cattle. In December 1913 a similar case occurred in the Wairarapa district of New Zealand, the owner losing six out of thirteen yearling heifers. Examination of the stomach-contents afforded evidence of the presence of lead paint and traces of snippings of iron plate. A thorough search for anything likely to cause lead-poisoning was made, and a quantity of old paint was found in the bottom of an old oil-drum, and the imprint of an animal's tongue was plainly visible on the partially dried paint. The portion of the drum containing the paint was only about 1 in. in depth, and consequently very hard to find in a twenty-acre paddock knee-deep in grass. The owner states that the paint must have been in the paddock for at least five years, and the wonder is that cattle which had been grazing there did not partake of it before. In view of the frequency with which chemical investigation in suspected poisoning cases is rendered abortive owing to the want of care in selecting and packing the specimens for analysis, instructions are given for sending material for poison analysis.

OPPORTUNITIES IN CHINA.—European fashions in hairdressing are being adopted by both sexes of the better-class Chinese, and this is leading to a great development in the trade in combs, hair-brushes, perfumes, cosmetics, etc. Foreign pharmaceutical products are being more and more demanded, and are consumed, preferably, in the form of pills, powders, and ointments. So says the "Bulletin Commercial" (Brussels).



## Prison-made Quinine Tablets.



N any attempt that is made to describe the manufacture and distribution of quinine in India, prominence must be given to the work carried on in the factory at the Juvenile Jail, Alipore, which was the subject of a recent article in the Calcutta "Statesman." It is over twenty years ago, when Sir Charles Elliot was Lieutenant-Governor, that the system of issuing quinine and making it available all over Bengal was commenced. The Jail Department took up this work, and for many years the Ali-

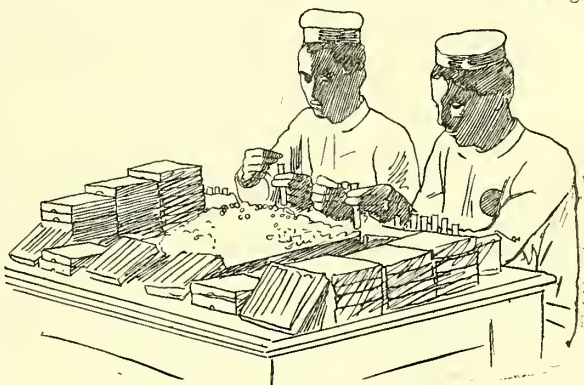
pore Central Jail used to supply pice packets of quinine for sale at all post-offices and other Government agencies throughout the province. This system quickly spread to other Indian provinces, and a very large number of pice packets were annually distributed. At first the quantity in each packet was 5 grains, afterwards increased to 7 grains, and in 1906 to 10 grains per pice packet. In 1908 the sale had shown signs of becoming stationary, and it was then suggested that the time had come to distribute quinine to the public in the more palatable form of tablets. This was approved by the Bengal Government, and in 1908 the manufacture of tablets was begun at the Juvenile Jail, Alipore, in the form of  $3\frac{1}{2}$ -grain tablets, three tablets being sold for one pice ( $\frac{1}{4}$ d.). Meanwhile, the late Government of Eastern Bengal and Assam introduced the plan of issuing quinine tablets in the form of "treatments," it being recognised that a single dose



GRANULATING QUININE SULPHATE.

f 10 grains was insufficient to treat thoroughly a case of malarial fever. This was a distinct advance, and the Eastern Bengal and Assam Government made a large contract with a London firm to supply these "treatments" in glass tubes containing twenty tablets of 4 grains each. After the redistribution of Bengal in 1912 the Jail Department suggested that it was possible to do the work of preparing these tablets in the Juvenile Jail, thereby effecting a large saving to the public. The suggestion was approved, and to-day large quantities are manufactured or distributed by "treatment"—i.e., a corked glass tube, containing twenty tablets of 4 grains each. A circular, giving directions in the vernacular, is wrapped up with each tube, and ten tubes are packed in a neat cardboard box, labelled and ready to be addressed and posted. The price of each treatment is fixed at four annas (4d.), which covers the cost and allows of a commission for the endor. These "treatments" are now on sale at all post-offices. The quinine is made in the Bengal Government factory at Mungpo, in the Darjeeling hills, from whence it is despatched in large boxes to Alipore. In the year

1913 6,000 lb. (96,000 oz.) of quinine was disposed of by the Juvenile Jail in the form of 31,000 boxes of "treatments," nearly 6,000 pice packets, and over 9,000 bottles, each containing 300 tablets. At the present time the Juvenile Jail is able to convert 40 lb. of quinine into tablets each working day—i.e., a daily supply of 70,000 tablets (4 grains each), and a stock is accumulating.



PACKING "TREATMENT" TABLETS IN TUBES.

to meet the demand which is expected when the malarial season arises. A successful attempt has also been made to manufacture sugar-coated tablets for the use of children, and a large number have been prepared and issued to civil surgeons for trial, as it is necessary to prove that they will keep well throughout the hot weather and rains. It need hardly be pointed out that the Government participation in the quinine business, which is, of course, not confined to the Bengal Government, is resented by importers and others who make their living by selling drugs in India.

## INDIA AND THE EAST.

(From the "C. & D." Correspondents.)

**COWHAGE.**—A Punjabi regiment, which recently underwent field training in the vicinity of a growth of *Muncuna pruriens* near Mandalay, suffered badly from an outbreak of "nettle-rash." The eruption, which (says the "Indian Medical Gazette") varied from a pin's head to a filbert nut in size, lasted for three days and then disappeared.

**MORPHINE-SMUGGLING.**—A ship's steward has been sentenced at Shanghai to two months' imprisonment and a fine of \$200 for attempting to smuggle 4 lb. of morphine by the s.s. *Siking*. In evidence, Mr. Wolfe, a Customs official, stated that during the last two months about 200 lb. of morphine had been seized and confiscated by the Customs. Most of it, he said, was brought from Japan by boys or servants on ships for Japanese chemists in China. The morphine which got through was taken to various shops and realised more than opium or gold, and the smugglers were well paid.

**"JAMAICA" SARSAPARILLA.**—The exports from the Province of Bocas del Toro, Republic of Panama, from whence is shipped the bulk of the so-called grey Jamaica sarsaparilla amounted to 23,282 kilos. (3,688 $\frac{1}{2}$ l.) in 1913, as compared with 22,671 kilos. (2,370 $\frac{1}{2}$ l.) in 1912. The destinations were:

To	1911.			1912.	
	Kilos.	£		Kilos.	£
U.K....	17,856	1 992	...	18,119	1,595
Germany	4,715	378	...	7,925	1,320
U.S.A.	...	—	...	2,293	774

**CHILIAN BORAX.**—The British Consul for the district of Antofagasta, Chile, states that the exports of borax from the Province amounted to 42,000 tons. He reports that there is some talk of the borax-works being closed down, owing to the probability of the Government levying an export-duty, a proposal regarding which is now before Congress. Hitherto this product has been free of any duty.



## TRADE REPORT.

The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers receive the goods into stock, after which much expense may be incurred in garbling and the like. Qualities of chemicals, drugs, oils, and many other commodities vary greatly, and higher prices than those here quoted are charged for selected qualities of natural products even in bulk quantities. Retail buyers cannot, therefore, for these and other reasons, expect to purchase at the prices quoted here.

42 Cannon Street, E.C., August 6, 6.30 p.m.

**O**WING to the European war and the extended Bank Holidays, business has been practically suspended since our last, the chief efforts of the commercial community being devoted to straightening out and adjusting their affairs to the new financial conditions, which it is anticipated by the end of the week will be of a much more favourable character. It is a very difficult matter to quote prices, and an extraordinary position has arisen. Manufacturers, wholesalers, and dealers have been inundated with orders, and stocks in several instances are already depleted. Such articles as citric and tartaric acids and cream of tartar are almost unobtainable, and fancy prices have been paid; quotations are nominal. Crude drugs as a rule are all held for higher prices, as are all Continental drugs and herbs. Prices of all Continental fine chemicals are from 10 to 15 per cent. higher. British bromides have been advanced  $1\frac{1}{2}d.$  to  $2d.$ , but, as with many other articles, regular consumers only will be supplied, and in the public interests strict economy will be necessary. The following are among the most important advances, but it must be understood that the prices quoted, except in cases where actual business has been done, are mostly nominal.

Acetone.	Lemon oil.
Antimony.	Linseed.
Belladonna-root.	Milk-sugar.
Bromides.	Potash chlorate.
Cantharides.	Potash permang.
Citric acid.	Russian drugs.
Continental fine chemicals.	Saltpetre.
Coriander-seed.	Salicylic acid.
Cream of tartar.	Sugar.
Dextrin.	Sulphur.
Glucose.	Tartaric acid.
Ipecacuanha.	Vanillin.

### London Markets.

**ACETONE.**—Business has been done at 100*l.* per ton spot, with 120*l.* asked.

**ANISEED.**—The last price paid for fair Russian on the spot was 27*s.* per cwt., but now holders ask 40*s.* Spanish is unchanged at 36*s.* per cwt.

**ANTIMONY.**—Business has been done at 17*l.* for Chinese crude.

**ARROWROOT.**—About 700 barrels St. Vincent have been sold, middling manufacturing at  $2\frac{1}{4}d.$  per lb., and up to  $4\frac{3}{4}d.$  for fine. The stock is 12,450 barrels, as against 7,702 barrels in 1913.

**BELLADONNA-ROOT.**—Business has been done in small lots at 70*s.* per cwt.

**BERGAMOT OIL.**—Business has been done in quite retail lots at 30*s.* per lb. Before the war 20*s.* c.i.f. was quoted for new crop.

**BROMIDES.**—The British makers have been inundated with orders, but the bulk of them will remain unexecuted, and nobody is likely to be supplied with more than his normal requirements. As a precautionary measure potassium has already been advanced by  $1\frac{1}{2}d.$  per lb. to 1*s.* 8*d.*, sodium by  $2d.$  to 2*s.*, and ammonium to 2*s.* 2*d.* per lb. net in 1-cwt. lots. It is felt that every effort must be made to conserve our home stock. As is well known, the sole European supply of bromine is derived from the

Stassfurt potash-mines. In view of the war the international agreements as to the supply of bromine are now at an end, and the United States should be free to supply bromine and its salts.

**CANARY-SEED** is firm owing to small stocks; ordinary to good Morocco has been sold at 83*s.* to 87*s.* 6*d.* per quarter, but there is nothing now to be had under 90*s.*

**CANTHARIDES.**—Business has been done in Russian at 7*s.* 9*d.*, but there is now no more obtainable at this price. Chinese are offered in a small way at 5*s.* per lb.

**CARAWAY-SEED.**—On Wednesday good Dutch on the spot could be bought at 30*s.* 6*d.* per cwt., being steady and unchanged.

**CARBOLIC ACID** is nominal, but the sentiment is decidedly firmer, and not until next week will prices be available. The British Government is about the only large buyer, but it is impossible to say what effect the elimination of German competition will have. Crystals are undoubtedly low at present, that being due to the synthetic article.

**CASCARA SAGRADA.**—There is a plentiful stock, and prices are normal at, say, 36*s.* to 37*s.* for new bark on spot and 37*s.* to 40*s.* for old. For shipment from U.S.A. the higher insurance risks on account of war may affect prices.

**CASTOR OIL.**—The price in cases is about 56*s.* for French and 56*s.* for Italian in retail lots.

**CHAMOMILES.**—The new Belgian crop is now suspended. For old crop on the spot 80*s.* is asked.

**CITRIC ACID.**—During the week 3*s.* per lb. has been paid, but the price is quite nominal and a matter of negotiation.

**COD-LIVER OIL.**—Our Bergen correspondent writes on Monday, August 3, that there is no business in cod-liver oil, and no price can be given.

**CORIANDER-SEED** is firmer at 13*s.* per cwt. for new crop on the spot, and 9*s.* for wormy.

**CREAM OF TARTAR.**—Business has been done in small lots at 110*s.*, but the price is quite nominal.

**CUMIN-SEED** is unchanged at 45*s.* to 47*s.* 6*d.* per cwt. for good new crop Morocco on the spot.

**DEXTRIN** of superior quality has been sold up to 19*s.* 6*d.* and prime to 18*s.* 6*d.*, marking an advance of about 5*l.* per ton.

**ERGOT.**—The spot price of Russian has advanced fully 6*d.* per lb., 2*s.* 3*d.* being asked for fair sound.

**FENUGREEK-SEED** sells slowly at 9*s.* per cwt. for fair Morocco. Some holders are asking higher prices.

**GERANIUM OIL.**—Business has been done in Algerian oil at 28*s.* per lb.; 34*s.* is the price asked for single lb.

**GLYCERIN.**—Quotations are nominal, but higher prices must be expected for the chemically pure. A meeting of the refiners will probably take place to discuss what action shall be taken.

**GLYCEROPHOSPHATES** have advanced about 30 per cent., as small stocks are held on this side.

**IODIFORM.**—The demand is large, and makers are now getting full contract rates.

**IPECACUANHA.**—Matto Grosso is quoted at 8*s.*, and Cartagena is about 6*s.* 8*d.* to 6*s.* 9*d.*

**LAVENDER OIL.**—Finest French has been sold in a few lb. lots at 28*s.* per lb.

**LEMON OIL.**—Several holders ask 11*s.* for small lots.

**LINSEED** is dearer at 52*s.* 6*d.* per quarter for good clean qualities.

**OLIVE OIL.**—Business in finest French has been done in retail lots at 12*s.* per gallon.

**QUICKSILVER.**—The second-hand price appears to be 6*l.* 12*s.* 6*d.* per bottle.

**QUININE.**—Some second-hand business was done previous to the war at 1*s.* 0*d.* to 1*s.* 0*d.* 4*d.* per oz., but price is now a matter of negotiation. It is said 1*s.* 2*d.* has been paid. The landings in London during July were 12,000 oz. and the deliveries 53,200 oz., leaving a stock on July 31 of 3,016,000 oz., against 3,578,560 oz. in 1913.

**ROSE-WATER.**—Carboys have been sold at 30*s.* in five-gallon lots.



**RUBBER.**—This market is closed.

**SALTPETRE.**—The price of British appears to be about 30s. per cwt.

**SULPHUR.**—For roll and flowers 77. 15s. and slightly under has been paid.

**TARAXACUM.**—The value is about 66s. per cwt. for small lots.

**TARTARIC ACID** is nominal, and, as we are dependent for supplies of our raw material from the Continent (principally Germany, Austria, Italy and Spain), we understand that makers are claiming *force majeure* on their c.i.f. contracts for delivery.

**TURPENTINE.**—The American spot price closes at 36s. 6d. The official value is fixed daily at 4 P.M. on the Royal Exchange.

### Continental Fine Chemicals.

There is no need to emphasise the fact that we are dependent on Germany for a large proportion of our supplies of fine chemicals, but the war has suddenly cut off all supplies, so that we are entirely dependent on the existing stocks in the hands of the agents for the Continental houses, a few dealers, and the wholesale druggists. There have been no letters from Germany for over a week now, and many cables have been sent to the effect to "withdraw all stocks," or "sell nothing." The leading London agents have had to act on their own initiative, and are doing the best possible in the interests of all their clients. So far as existing contracts are concerned, delivery will be given where possible. Generally, it may be said that prices are from 10 per cent. to 15 per cent. dearer, and it is felt that economy in use of the materials is superior to other considerations.

### Notice to U.S. Drug Importers.

The United States Department of Agriculture, Bureau of Chemistry, Washington, has issued the following notice, signed by the Chief, Mr. C. D. Alsberg:

Referring to the importation of fennel, coriander, cardamom, anise, and celery seed, you are advised that it is the opinion of this Department from the data available that these goods should meet the following specifications:

**FENNEL** should contain not less than 96 per cent. of sound fennel-seed, nor more than 9 per cent. of ash.

**CORIANDER** should contain not less than 95 per cent. of sound coriander-seed, and not more than 7 per cent. of ash.

**CARDAMOM** should contain not less than 64 per cent. of sound cardamom-seed, and not more than 36 per cent. of inert material, including the pods; ash of the whole fruit not to exceed 8 per cent.

**ANISE** should contain not less than 97 per cent. of sound anise-seed, and not more than 9 per cent. of ash.

**CELERY-SEED** should contain not less than 90 per cent. of sound celery-seed, and not more than 10 per cent. of ash.

The above products must not contain fecal matter or anything of a harmful nature.

The action at the ports of entry will be governed according to the above specifications.

### Montserrat Bay Oil.

As the result of investigations conducted over a period of two years in Montserrat, the Report of the Botanical Station for 1912-13 states that the cultivation of the bay-tree could be developed probably as a small industry. Monthly distillations have been carried out to determine the best time for picking the leaves, and experiments made to ascertain whether the export of the dried leaves or oil would prove more profitable. A study of the differences in yield and quality of oil from selected trees seemed to indicate that selection would lead to improved results. The amount of bay oil and leaves exported from the island in 1912 was 43 gals. and 12,289 respectively; these exports were derived from uncultivated forest-trees.

### Tonkin Star-anise Oil.

The "Tropical Journal of Agriculture" (1914, 14, 40) contains an article on the star-anise oil industry of the Langson district of Tonkin, the area from which two-thirds of the star-anise oil imported into Europe is derived. The star-anise tree (*Illicium verum*) flourishes best in that part of Tonkin which has a moist and somewhat variable climate, and especially on hill-sides with a red-clay-schist soil. The seeds are said to lose their power of germination rapidly, and the Chinese preserve them in layers of dry earth. The plants should at first be well sheltered from the sun, and then require a great deal of attention until the eighth or tenth year. The fruit appears between the tenth and

fifteenth years, and during a period of twenty to thirty-five years the trees are in their prime, and should produce two crops a year. Five tons of green fruits per hectare (2.47 acres) is stated to be a good yield for a mature plantation. Mention is made of the diseases and insect-pests to which the tree is subject. In the event of a bad crop of fruits the natives distil the leaves, which yield about one-tenth as much oil as the former. Although the leaf-oil has not quite the same characters as those of the fruits, it is stated that local buyers do not discriminate between them. The yearly production of oil from Tonkin is variable; the output in 1910 was 66 tons, rising to 100 tons in 1911, and falling again to 46 tons in 1912.

### Sicilian Produce.

No reports have as yet been published by the Camera Agrumaria for the year ended November 30, 1912-1913, but from the annual report of the Bank of Sicily for 1913 the British Consul for Sicily learns that the production of citrate of lime and concentrated lemon-juice (*agrocotto*) during the year 1912-13 was exceptionally small, the quantity barely reaching 3,445 metric tons of citrate and 100,196 litres (22,042 Imp. gals.) of *agrocotto*, or considerably less than the mean annual production or consumption during the last five years. The year's production was all sold, together with the small stock—1,062 m. tons of lime citrate and 115,300 litres (25,366 Imp. gals.) of *agrocotto*—left over in the stores of the Chamber on November 30, 1912. The Chamber was able to make advances of 2,990,500 lire (119,620*l.*) to depositors of citrate, etc., out of its own cash resources, without other assistance from the banks than 100,000 lire (4,000*l.*) from the Bank of Sicily and 392,785 lire (15,710*l.*) from the Bank of Naples. The exports (m. tons) from Palermo included the following:

	1911	1912	1913	To United Kingdom
Citrate of lime ... ..	2,101	693	88	—
Citric acid ... ..	—	—	168	46
Tartar and lees ... ..	4,411	2,476	1,415	45
Cream of tartar ... ..	—	—	143	143
Manna ... ..	290	175	186	13
Citrus-peel ... ..	785	260	119	30
Lemon and lime juice ...	537	300	378	30
Citrus-fruit essences (cwt.)	2,659	1,078	1,968	659
Olive and sulphur oils ...	1,415	928	1,916	248
Almonds ... ..	3,955	2,497	857	59
Sulphur ... ..	—	—	7,275	428

From Messina the exports of citrate of lime in 1913 were 3,339,554 kilos., divided as follows: U.K., 715,073; U.S.A., 1,016,319; France, 757,661; Netherlands, 251,003; Austria-Hungary, 196,555; Germany, 199,283; Italy (Palermo), 203,660 kilos. Other produce exported from Messina included the following:

	1911 Tons	1912 Tons	1913 Tons	To United Kingdom Tons
Bergamot, orange, and lemon oils	307	374	338	81
Citrate of lime ... ..	1,345	3,345	3,276	703
Tartar and wine-lees ...	3,720	2,978	3,059	861
Lemon-juice—				
Raw ... ..	361	848	945	415
Concentrated ... ..	423	147	230	222
Liquorice juice ... ..	116	232	201	9
Olive and sulphur oils ...	530	538	699	—

The Catania exports included 1,097 m. tons citrate of lime, against 2,424 m. tons in 1912; also 1,411 m. tons of tartar and lees, against 1,795 m. tons in 1912. Syracuse also shipped 208 m. tons of citrate of lime, against 386½ m. tons in 1912 and 442 m. tons in 1911.

### Various Essential Oils.

The quarterly "Bulletin of the Imperial Institute" just issued contains an interesting article on "Essential Oils from Various Countries," these including lemongrass from India, vetivert and lime oils from Fiji, ylang-ylang oil from the Seychelles and Mauritius, and clove, clove-leaf, and sandalwood oils from Mauritius. The most important is that dealing with Cochin lemongrass oil, samples of which were forwarded to the Imperial Institute by the Director of Agriculture at Madras in February 1913, as the result of statements that the Cochin lemongrass oil marketed in the United Kingdom had recently begun to show signs of "insolubility." It may be explained that hitherto two kinds of lemongrass oil have been recognised in commerce—viz., Cochin, which is "soluble" in two or more volumes of 70-per-cent. alcohol, and West Indian oil, which is "insoluble" in 70-per-cent. alcohol. The samples were examined in order to determine their solubility in 70-per-cent. and 80-per-cent. alcohol, and the results are tabled in the article. They show that three out of the five oils would be classed as "insoluble," and support the statement that the proportion of "insoluble" oil from



Cochin has increased recently. As it was considered that this change in the character of the lemongrass oil shipped from Cochin might be due either to the employment of a variety of lemongrass different from that formerly used, or to a change in the method of distillation, further specimens of oil, obtained from the different kinds of grass used, were requested for examination. Two samples were accordingly submitted, one distilled from "white-stemmed" and the other from "red-stemmed" grass. The Director of Agriculture stated that both varieties grow wild, but that it is reported that in North and Central Travancore the "red-stemmed" variety is cultivated to some extent. He mentioned that the oil is extracted from the wild and cultivated grasses indiscriminately. The "white-stemmed" was a cloudy yellow oil with an odour more nearly resembling that of citronella oil than lemongrass. In 80-per-cent. alcohol the oil was soluble in 0.8 or more volumes, becoming slightly turbid with 4 volumes on shaking the oil; in 70-per-cent. alcohol the oil was not soluble in 5 volumes. The "red-stemmed" oil was soluble in 80-per-cent. alcohol, but not in 70-per-cent. alcohol, and further experiments were carried out to ascertain the cause. As a whole, the experiments indicated that the more volatile portions of the "red-stemmed" lemongrass satisfy the test for solubility in 70-per-cent. alcohol, whereas the less volatile portions do not. The insolubility of the entire oil is therefore apparently caused by the inclusion of these less volatile fractions of oil, the presence of which is probably due to the distillation having been carried too far.

## London Drug Statistics.

THE following statistics are compiled from information supplied by public warehouses. They relate to the receipts and deliveries of some of the leading drugs from and into the London public warehouses for the month of July, and to the stocks on July 31, 1914:

	Stocks		Imported		Delivered	
	1914	1913	1914	1913	1914	1913
Aloes .....cs., etc.	1,093	993	1,089	978	977	1,114
" .....gourds	1,322	1,322	—	—	—	142
Anise, star .....cs.	—	—	—	—	—	—
Arrowroot .....pkgs.	12,498	7,851	13,187	10,538	5,868	5,636
Balsams .....cks.	153	115	119	36	128	56
Calumba .....pkgs.	870	1,931	998	544	1,394	1,063
Camphor ..... "	556	991	5,394	5,006	5,925	5,468
Cardamoms ..... "	1,086	1,029	2,861	2,041	2,367	1,662
Cinchona ..... "	3,278	3,358	2,127	2,609	2,100	2,786
Cubebs ..... "	130	146	47	127	108	55
Dragon's-blood ..... "	60	85	147	96	142	121
Galls ..... "	1,948	4,283	997	3,748	2,180	1,714
Gums—						
Ammoniacum ..	68	77	54	85	19	29
Animi & copal ..	8,435	19,209	32,118	38,652	32,694	32,360
Arabic ..... "	3,915	7,813	3,269	5,489	6,333	6,103
Asafoetida ..... "	1,328	2,039	428	1,308	746	890
Benzoins ..... "	586	621	1,082	822	1,078	2,139
Damar ..... "	2,551	3,705	5,027	4,650	5,576	5,028
Gamboge ..... "	89	158	74	150	60	83
Guaiaicum ..... "	97	56	54	70	9	44
Kauri... tons net	689	366	877	523	545	313
Kino ..... pkgs.	29	50	—	—	19	9
Mastic ..... "	13	21	7	20	3	13
Myrrh, E.I. ....	320	330	136	61	192	198
Olibanum ..... "	1,052	1,231	514	569	331	658
Sandarac ..... "	294	525	556	863	641	791
Tragacanth ..... "	10,150	6,771	11,734	9,263	8,312	8,355
Ipecacuanha ..... "	375	165	433	391	354	452
Jalap .....bls.	154	224	149	99	184	169
Nux Vomica .....pkgs.	6	286	80	969	93	903
Oils—						
*Anise, star .....cs.	51	10	71	84	33	74
*Cassia ..... "	43	32	85	—	80	20
Castor .....pkgs.	215	210	773	883	521	855
Coconut .....tons	632	310	1,320	778	1,064	857
Olive .....pkgs.	1,784	1,924	4,255	3,200	3,917	3,371
Palm .....tons	50	56	—	10	—	25
Quinine .....lb.	—	—	—	—	—	—
Rhubarb .....cs.	575	552	238	324	383	425
Chin. Rhap. ....bzs.	2,377	2,488	—	2,001	80	86
Sarsaparilla .....bls.	91	231	511	483	511	463
Senna .....pkgs.	624	1,303	1,676	1,212	2,778	2,011
Shellac .....cs.	98,393	90,875	31,454	25,593	26,991	33,138
Turmeric .....tons	285	372	100	156	270	263
Wax—						
Bees' .....pkgs.	1,691	1,874	2,402	1,693	2,335	1,960
Vegetable ..... "	539	416	856	309	664	507

\* Stocks of essential oils at Smith's Wharf and Brewer's Quay are not included.



## Memoranda for Correspondents.

All communications must be accompanied by the names and addresses of the writers, otherwise they cannot be dealt with. Queries by subscribers on dispensing, legal, and miscellaneous subjects connected with the business are replied to in these columns if they are considered to be of general interest. Correspondents are requested to write each query on a separate piece of paper. Every endeavour is made to reply to queries without delay, but insertion of the replies in "the next issue" cannot be guaranteed, nor, as a rule, can they be sent by post. Letters submitted for publication (if suitable) should be written on one side of the paper only. Their publication in "The Chemist and Druggist" does not imply Editorial agreement with the opinions expressed.

## The Toast at the B.P.C. Dinner.

SIR,—I agree entirely with what Dr. McWalter says in the *C. & D.*, August 1, as to the Society's toast at the Chester dinner, and he is to be congratulated on being courageous enough not to shrink from sounding the one and only discordant note heard in connection with the Chester Conference. He is to be complimented, too, on expressing himself with so much restraint, his words "gross breach of etiquette" being only too mild in the face of such alarming provocation. I go further than Dr. McWalter, and assert that the toast in question should have included the Pharmaceutical Societies of each Continental country, and of China and Japan as well. In addition, there ought to have been no omission of the various medical societies and associations of the same areas. Some mention, too, should have been made of the numerous Insurance Committees throughout the length and breadth of the land, with special reference, for purposes of comparison, to similar bodies in Germany. It is a pity, now one comes to think of it, that Dr. McWalter himself did not undertake all this. Speeches were not over till 11 P.M. as it was, so that a few extra hours might not have mattered.

I am, etc.,  
VERY, VERY VEKED. (51/38.)

## Menial Work and Apprentices.

SIR,—Is it menial work dusting and occasionally washing the shop-bottles, or even washing up the measures or cleaning the scales? I for one do not think so. We pander too much already to the younger generation, and we certainly get very little in return. Shorter hours and easier are needed in many places, but we must remember that there are other considerations. It may not be easy to get apprentices; is it any easier to get errand-boys—presumably for the menial work and to wait on the apprentices? I do not think it is, and as time goes on it will be more difficult still. Some of the errand-boy class are, or should be, if as a preliminary they had—as they should have—a sufficiency of food to help them to assimilate the several standards prescribed by the county schools—practically as good as these mushroom superiors. There is very little in the work of a pharmacy which can be termed menial. I have read somewhere that in many parts of America quite wealthy people and their guests take a share of dish-washing, having no choice in the matter, but are none the worse for the experience. Here is an instance of the errand-boy doing the menial work of two apprentices. We were alone for the time, and I was making some stock mixtures. "Frank," said I, "what is five times ninety-six?" He thought about two seconds and said, "480, Sir." And I asked: "Five times 160," then the answer, "800, Sir," as prompt as you please. Now, I like that sort of boy, and it won't be my fault if he does not progress. The time comes when such boys ask themselves, and quite rightly, "Why should I do the dirty work of those other two?" or whoever may be just above them. Modern apprentices are addicted, on extremely small grounds, to a condition of swollen head, and anything tending to exaggerate the evil is to be deprecated. Many of the lads I have helped to



train possess just as much muscular power as will enable them to mass and roll a couple of dozen pills, if not too hard, and if a little additional time would have the effect of developing their biceps I should be glad for one. For their intellectual capacity I have not much opinion—they are usually "slow in the uptake"; in short, the pharmacist—general referee and consultant on anything and everything—of the old style and calibre appears likely to die out. But to return to the immediate question, why not try to work out a Preliminary curriculum in line with the educational authorities, Board and Council schools—accepting, then, a certain standard in lieu of the present Preliminary, with the ultimate result that every lad we take may then have in front of him a clear road to the Minor examination?—Yours, etc.,

MANAGER. (36/91.)

### Subscribers' Symposium.

For questions, answers, incidents, and interchange of opinions among "C. & D." readers.

#### Counter-irritation.

Scene: in Midland chemist's shop. Farmer: "I had five cows poisoned last week." Chemist (with concern): "How was that? Who did it?" Farmer: "You." The chemist regained equanimity when he realised that the farmer meant "Yew."—S. H. C. (51/25).

#### Appreciations.

A subscriber (29/52) in Barranquilla (Republic of Columbia), writing on June 20, said: "I thank you for the publication which I have received for the past four years, and congratulate you, not only on the excellence of all the matter your admirable paper contains, but on the whole of the organisation with which it is sustained."

#### Impurities in Sulphurous Acid and Sulphites.

"In the monograph of official tests for acidum sulphurosum there is no mention made of the possible presence of selenium and tellurium. It is desirable that a suitable test be inserted, as these substances are not infrequently to be found in this preparation, and their effect upon the breath of patients is not a pleasant one. The same remarks apply to sulphites and metabisulphites, both of which are used as preservatives in foods and drinks."—Abel Scholar.

#### Odour of Wood-naphtha.

In your issue dated August 1 you reply to a correspondent, "Photo (11/9).—GLAZING SOLUTION FOR PHOTOGRAPHS.—This is wood-naphtha containing formaldehyde . . ." It would be interesting to know how the operator gets rid of the odour of wood-naphtha. The usual thing is a solution of formaldehyde (40 per cent.), 1 in 40 of water. Soak the prints in this for not more than five minutes. Prolonged soaking makes the prints leathery while wet, and when dry the gelatin is so hard that it will crack like glass. Some years ago a contributor to "Photography and Focus" showed how certain chemicals affected the hardening action of formaldehyde on gelatin. The presence of a small proportion of calcium hydroxide was said to be advantageous. Formaldehyde, being volatile, has an advantage over alum in that it does not require washing out, but the fumes are irritant and affect the eyes and mucous lining of nose and throat.—C. W. Kemsey-Bourne (West Bromwich).

#### A Minor Problem.

"I attach a calculation which was given to a candidate at the last Minor examination. He failed to give the correct answer, and down he came. I give you my own solution of it. Would you be good enough to state the correct method of solving the problem? My principal says my solution is not correct, and that I ought to take the sp. gr. of the glycerin into account."—E. H. J. (27/38).

Calculation: Make 3iv. of solution of mercuric chloride in glycerin, so that when 3j. is diluted to 1 pint with water it shall be 1 in 5,000.

My own solution works out to 56 grains HgCl<sub>2</sub> in 3iv.

[The way to work is this:

One pint = 20 fl.oz. = 437.5 × 20 = 8,750 grain measures.

5,000 grain measures = 1 grain HgCl<sub>2</sub>.

∴ 8,750 grain measures =  $\frac{1 \times 8750}{5000}$

= 1.75 grain HgCl<sub>2</sub>

in each 3j. conc. sol.

∴ 1.75 × 32 = 56 grains HgCl<sub>2</sub>

in 3iv. glycerin.

This is the answer that "E. H. J." gives. Specific gravity has to be ignored.—EDITOR C. & D.]

### Miscellaneous Inquiries.

We do not undertake to analyse and report upon proprietary articles, and when samples are sent particulars should be supplied to us as to their origin, what they are, what they are used for and how.

We do not as a rule repeat information which has been given in this section during the past twelve months, as it occupies space which can be more profitably utilised for other information. In such cases the numbers are mentioned, and if querists cannot refer to these they may obtain the numbers from the "C. & D." Office at the published price, usually 6d.

#### F. & G. (22/16).—WORM-POWDERS FOR HORSES:

1.	2.
Sulphur ... .. ½ oz.	Santonin ... .. 12 dr.
Common salt ... .. ½ oz.	White arsenic ... .. 1 dr.
Iron sulphate ... .. 1 dr.	Iron sulphate ... .. 12 dr.

Mix, and give in the food once a day for a fortnight.

Mix, and divide into twelve powders. One to be given in the corn every day until six have been given; then give a purge, and two days later begin with the remaining powders.

M. F. W. (22/53).—WEED-KILLERS FOR GARDEN-PATHS.—(1) Hydrochloric acid 2, water 3; (2) saturated solution of acid potassium sulphate; (3) copper sulphate 1, water 9. The directions are: Mix a pint of any one of these with a painful of water, and use on the paths with a watering-can.

W. J. S. (22/71).—COMPLEXION-WAX.—Your letter is somewhat contradictory, but we gather that what you require is a skin-application of this nature:

Ol. nucis ... ..	5 oz.
Cetacei ... ..	450 gr.
Ceræ alb. ... ..	450 gr.
Zinci oxidi ... ..	300 gr.
Pulv. ac. borici subtil. ... ..	150 gr.
Aq. dest. ... ..	100 minims
Heliotropin ... ..	5 gr.
Coumarin ... ..	3 gr.

Melt the spermaceti and wax with about three-fourths of the oil, and while still warm add the remaining oil with which the zinc oxide, boric acid, heliotropin, and coumarin have been rubbed, and stir till the mixture begins to set. Pour into suitable tins, and when set warm the surface till it melts, so as to give a polished appearance.

Jacko (26/46).—(1) FORMALDEHYDE FOOT-POWDER.—We have not a formula for this, but the addition of a small percentage of paraform, in place of salicylic acid as in ordinary foot-powder, would give the required result. (2) Formalin is used for hardening soft corns before removal. It does not, however, act instantaneously, but is applied for a day or two before the chiropodist operates.

G. D. M. (22/41).—(1) CHILDREN'S COOLING-POWDERS.—See C. & D., April 18, p. 614. (2) BOOT-POLISH.—See C. & D., August 16, 1913, p. 80. (3) FERTILISER FOR GENERAL USE:

Sodium chloride ... ..	2
Potassium nitrate ... ..	1
Magnesium sulphate ... ..	1
Sodium phosphate ... ..	4

Directions: One teaspoonful to be dissolved in a quart of water, and the plants sprinkled daily with the solution.

Many more recipes are given in "Pharmaceutical Formulas."

J. J. C. (26/57).—WEATHER-GLASS.—Nearly fill a glass tube 10 in. long and  $\frac{3}{4}$  in. diameter with the following liquid, then hermetically seal:

Camphor ... ..	5ij.
Potassium nitrate ... ..	3ss.
Ammonium chloride ... ..	3ss.
Absolute alcohol ... ..	3ij.
Distilled water ... ..	3ij.

Dissolve.

The indications (which at most are only approximate) are that a clear liquid implies bright weather; a dim liquid, rain; dim liquid with small stars, thunderstorms; large flakes, heavy air, overcast sky, snow in winter; threads in upper portion of liquid, windy weather; small dots, damp weather, fog; rising flakes which remain high, wind in the upper air regions; small stars in winter on bright, sunny days, snow in one or two days.



**Horticultural (37/7).—CARBOLIC SOFT SOAP.**—Place 6 cwt. of linseed oil, 3 cwt. of corn oil, and 1 cwt. of olive oil in a large pan fitted with steam-jacket and dry-steam coils. Then run in 50 gals. of caustic-potash lye at 30° T., and boil by means of dry steam. When the mixture is boiling steadily run in another 50 gals. of lye at 40° T., and boil steadily for about half an hour. Then shut off the steam-coils and allow the contents of the pan to simmer for two hours by means of the steam-jacket heat, adding at intervals a further 50 gals. of lye at 40° T. The soap is then boiled for about an hour until, on testing, the alkali is found to be combined—the soap-maker tests this by placing a sample on glass and leaving it to cool, when it should remain clear with a dull ring round the outside, and also by absence of stringiness. When the temperature of the soap has cooled to 150° F., there is added to every 95 parts of soft soap a mixture, previously prepared, of 5 parts No. 2 carbolic acid and 1 potash-lye at 52° F.; this is well incorporated, and the soap run into barrels to cool.

**G. E. (24/7).—**No doubt the three BALD SPOTS on your customer's head are *Alopecia areata*, but what is the cause of it? Upon the answer to that greatly depends the treatment. The age and sex of the customer should also be known. The trouble is not an uncommon one with school-boys and others who get injuries to the head or face—as, for example, from a cricket-ball—and the bald spots begin to appear between six and twelve months after the injuries have been received. External applications are rarely of service unless the baldness is parasitic. On these points we should require information before replying differently from what you will find in "Pharmaceutical Formulas" and "Diseases and Remedies."

**Freestone (33/29).—DAMP-WALL COMPOSITION.**—The sample which you submit of liquid for treating damp walls appears to be a metallic resinate suspended by means of resin-soap. The cresol which is also present is useful as a disinfectant where the damp walls are in cellars or other dark positions. The resinates, which are used in paints and varnishes to promote drying, are made by saponifying powdered resin with an alkaline hydrate or carbonate, and the soluble alkaline resinate thus obtained is used to precipitate the metallic salt from its aqueous solutions by double decomposition.

**J. M. (33/11).—FIXING WALNUT-STAIN.**—Without knowing the composition of the walnut-stain it is not possible to give a useful answer. There are several varieties of walnut-stain, some of which are quite permanent, as a reaction takes place between the stain and the wood. Others again are suspensions of burnt umber or sienna, and can be removed by washing, unless the suspending liquid is of the nature of varnish.

**W. R. W. (44/72). BOOKS ON BOOKKEEPING.**—Thornton's "First Lessons in Bookkeeping" (2s. 6d.) and "Bookkeeping for Business Men" (3s. 6d., Macmillan). The subject has been dealt with many times in THE CHEMIST AND DRUGGIST; references can be obtained by consulting the index.

**E. R. J. (29/47).—**The sample you send can hardly be described as "a liniment for the back." It is a calamine, zinc oxide, and rose-water lotion, such as is employed for dabbing on the skin in inflammation.

**T. S. M. (Lahore) (205/12).—(1) DETERMINATION OF GLYCERIN IN SUPPOSITORIES.**The following is a method recently devised by Vanderkleed and Heidelberg. It is applicable to the stearate suppositories to which you refer:

Half a suppository (2 grams) is dissolved in a separator with hot water acidified with sulphuric acid and shaken out with ether, thereby separating the stearic acid. The aqueous solution is evaporated to a small volume, then transferred to a 250-c.c. volumetric flask, and filled to the mark with water. Twenty-five c.c. of the filtered solution is measured into a 250-c.c. volumetric flask, 35 c.c. of standard potassium bichromate added, and lastly 25 c.c. of sulphuric acid added slowly, with constant rotation to avoid ebullition. The flask is then transferred to a water-bath for twenty minutes, cooled, and filled to the mark. In 25 c.c. of this solution the excess of standard bichromate is determined by adding 20 c.c. of potassium-iodide solution and titrating against N/10 thiosulphate. One c.c. of standard bichromate is equivalent to 0.01 glycerin. The bichromate solution is made by dissolving 74.615 grams recrystallised potassium bichromate in distilled water, adding 150 c.c. sulphuric acid, and making up the volume to 1,000 c.c. at 20° C.

(2) ESTIMATING CAMPHOR.—The most successful method of estimating camphor in liquids is to form the oxime, a

crystalline compound, by adding to the alcoholic solution of camphor a concentrated aqueous solution of hydroxylamine hydrochloride, adding sodium carbonate until the liquid is alkaline to litmus, diluting the solution with alcohol to precipitate the camphor oxime, and allowing to stand for eight days to separate completely. The following are the details of a similar process as worked out by H. C. Fuller, of the Bureau of Chemistry of the United States Department of Agriculture:

Measure 25 c.c. of the sample into an Erlenmeyer flask of 100-c.c. capacity, add 2 grams of sodium bicarbonate, and from a burette 35 c.c. of hydroxylamine solution made by dissolving 20 grams of hydroxylamine hydrochloride in 30 c.c. of water and 125 c.c. of aldehyde-free alcohol. The flask is connected with a reflux condenser, and heated for gentle boiling for two hours; it is then cooled to 25° C., treated with a mixture of 6 c.c. of hydrochloric acid (1.12 sp. gr., with 6 c.c. of water), transferred to a 500-c.c. volumetric flask, rinsing out the condenser and flask with water, and finally made up to volume; 55-c.c. portions are filtered off and titrated as follows: Methyl orange is added and the mineral acid neutralised with normal alkali, then phenolphthalein is added, and the hydroxylamine hydrochloride titrated with N/10 sodium hydroxide. A blank must be run at the same time, using the same amount of hydroxylamine solution and 25 c.c. of alcohol to correspond with the spirituous camphor solution taken, the difference in titrations representing the hydroxylamine converted into camphor oxime. Each c.c. of N/10 sodium hydroxide is equivalent to 0.01509 c.c. of camphor.

**Fenman (24/46).—NATIVE EARTH.**—The sample resembles tripoli in many respects, except that it is too dark, but with proper treatment could probably be utilised as an ingredient of a polishing-paste. You might experiment with a mixture of the finely sifted earth and soft paraffin, or get into correspondence with some of the large makers of polishing pastes or liquids. We are afraid, however, that the colour will not be acceptable.

**Aspirin (40/26).—PRESERVING PEAS.**—The following is the method followed by manufacturers for bottling or canning peas: The peas are shelled, graded, and picked over. The first two operations are done by machinery, and for picking over the peas are allowed to fall on tables, where workers take out any peas that are discoloured. The next step is that known as "blanching," and consists in cooking the peas in weak salt solution until they soften (this takes from five to ten minutes), and then quickly cooling with water. The peas are then placed in bottles or cans, which are filled up with brine, exhausted of air, and sealed up. The final operation is that of "processing," which is a sterilisation method, the jars or bottles being heated to 236° to 240° F. for from fifteen to thirty minutes, according to the size of the peas and size of containers. The brine used is of a strength of 3 per cent., or a sweet brine, containing in addition 2 per cent. of sugar. Some makers flavour this brine with onion and tint with lettuce-leaves. A trace of copper sulphate was formerly added to the brine for the purpose of fixing the colour of the peas, but this is not now employed.

## Retrospect of Fifty Years Ago.

Reprinted from "The Chemist and Druggist," August 15, 1864.

### Parliamentary.

**POISONED FLESH PROHIBITION BILL.**—On the 23rd ult. this Bill was read a third time in the House of Lords, and passed. Its provisions are similar to those of the Poisoned Grain Bill of last year.

**WEIGHTS AND MEASURES BILL.**—This Bill passed through Committee in the House of Lords on July 26, and has since been printed as an Act of Parliament to render permissive the metric system of weights and measures. It recites that for the promotion and extension of our internal as well as our foreign trade, and for the advancement of science, it is expedient to legalise the use of the metric system of weights and measures. It enacts that, notwithstanding everything contained in any Act of Parliament to the contrary, no contract or dealing shall be deemed to be invalid or open to objection on the ground that the weights or measures expressed or referred to in such contract or dealing are weights and measures of the metric system, or on the ground that decimal subdivisions of legal weights and measures, whether metric or otherwise, are used in such contract or dealing. In a schedule annexed to the Act the equivalents of metric weights and measures are set forth.



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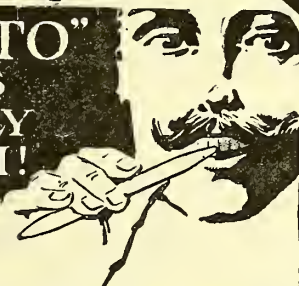
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**RESULTS**  
OF ADVERTISING IN THIS SUPPLEMENT  
LAST WEEK AUG 1 1914

NATURE OF ADVT.	REPLIES
ASSIST FOR CITY PHARM.	22
UNQUAL. MANAGER	20
QUAL. MANAG. ASSIST.	19
QUAL. OR UNQUAL. ASSIST.	14
"	13
"	13

This Blackboard demonstrates that Advertisers using these columns get a ready response to their announcements. The figures only refer to some of the letters RECEIVED AT OUR OFFICE on behalf of Advertisers who use a number or nom de plume.

### TO SAVE TROUBLE.

MANY correspondents answering advertisements in this Supplement enclose remittances to cover the cost of forwarding their letters to advertisers who prefer to be addressed c/o this Office. The Publisher desires to make it clear that this is quite superfluous, and perhaps this reminder will obviate the necessity of the frequent return by him of such remittances.

### ANSWER IN TERMS OF THE ADVERTISEMENT AND

REMEMBER you are one of possibly hundreds applying for the same position. Put your case before the advertiser so that he may be able to form a MENTAL PICTURE of your suitabilities.

BE BRIEF BUT CLEAR.—Millions of applications are consigned to the waste-paper basket UNCONSIDERED, because the reader cannot form this picture from the inadequacy of the materials set before him.

### RETAIL.

**ALTRINCHAM.**—R. H. Tootill, Pharmaceutical Chemist, requires a smart qualified Assistant for good-class Family, Dispensing, and Photographic business; must be a capable Salesman, neat, accurate, and obliging, and well able to take entire charge if necessary. State full particulars of experience, age, references, and salary required (outdoors).

**BARNSTAPLE.**—Wanted, competent Assistant, 27 to 30 years of age; qualified preferred; one kept; outdoors; hours 8 a.m. to 8 p.m., Saturdays 9.30 p.m.; no Sunday or Bank Holiday duty. State full particulars and send photo (to be returned) to E. W. Proudman, 1 Fish Street, Barnstaple.

**BIRMINGHAM Suburb.**—Qualified Assistant for medium-class business, with N.H.I. Dispensing, etc.; no heavy trade; outdoors; age immaterial; every consideration would be given to steady man seeking a permanency. Apply in first instance by letter, giving full particulars, to C. Moores & Co., 11 Bromsgrove Street, Birmingham.

**BRIGHTON** (September 1).—Gentlemanly Assistant, unqualified, for high-class Pharmacy; indoors; easy hours. Apply, giving full particulars as to age, height, experience, and salary required (photo), to T. Read, Victoria Pharmacy, Kingsway, Hove, Brighton.

**BRIGHTON.**—Wanted, gentlemanly Junior, about 21, for modern Cash business, with Photography; very comfortable berth to willing man with good reference. Apply, stating age, height, references, and salary required (outdoors), to "Progressive" (203/14), Office of this Paper.

**BUSH HILL PARK.**—Qualified Managing Assistant required immediately; indoors; very comfortable home; reasonable hours; no Sunday, Bank Holiday, or other duty. Please state experience and salary required, J. E. Hyde, Pharmacist, Bush Hill Park, Enfield.

**COVENTRY.**—Wanted, a good reliable Junior Assistant, about 23 years of age, for General work and Dispensing; comfortable place for one desiring a permanency. State age, height, and salary (indoors), with photo and full particulars, Welton, Chemist, Bishop Street, Coventry.

**CROYDON MENTAL HOSPITAL**, Upper Warlingham, Surrey.—Lady Dispenser wanted; candidates must be between the age of 21 and 35 years and must possess a certificate in Dispensing; wages £35, rising by annual increments of £5 to £50 per annum, with board, lodging, washing, and uniform; the appointment will be subject to the provisions of the Asylum Officers' Superannuation Act, 1909, but will be excepted from the National Health Insurance Act, 1911. Apply to the Medical Superintendent stating age, experience, and enclosing copies of two recent testimonials and photograph.

**GLOUCESTER.**—Wanted, a good, reliable Assistant (22-24) for General work and Dispensing; comfortable place for one desiring a permanency; outdoors. State age, height, and salary with photo and full particulars, Broad, Chemist, Gloucester.

**LANCASHIRE.**—Smart unqualified Assistant required for an up-to-date business; must bear an exceptional character and have had good Counter and Dispensing experience. State age when at liberty, and salary required, "Preston" (202/42), Office of this Paper.

**LEEDS GENERAL INFIRMARY.**—Junior Assistant Dispenser (male) wanted; must be quick and accurate; meals provided whilst on duty. Applications, stating age, salary required, and copies of testimonials, to be sent to the undersigned. Fred J. Braithwaite, General Manager.

**LONDON.**—High-class Store Chemist, N.W. district, requires a good reliable Junior Assistant, age about 21; comfortable permanency to the right applicant. "Golder" (202/45), Office of this Paper.

**LONDON.**—Wanted immediately, Junior Assistant (outdoors) for large up-to-date Pharmacy, with knowledge of Dispensing and Photography preferred. Apply, giving usual particulars, "Manager" (202/35), Office of this Paper.

**LONDON, E.**—Assistant wanted; must be a good Dispenser and have good references; salary 30s. per week. 204/1, Office of this Paper.

**LONDON, N.E.**—Junior Assistant wanted for working-class district; good wages to suitable man. Apply, S. Briggs, Chemist, Broadway, Crouch End, N.

**LONDON, S.E.**—Wanted, qualified Junior Assistant in a Retail and Dispensing business; state age, experience, and salary required (indoors); an application from an unqualified Junior (with time for study) would be considered. A. Peel, 71 Moon Lane, Herne Hill, S.E.

**LONDON, S.E.**—Wanted, qualified Manager for working-class business; outdoors; personal application preferred, but by letter please give fullest particulars of experience, salary required, etc.; close at 1 o'clock on Thursdays; one other Assistant kept; Insurance and General Retail. Williams, Chemist, 19 High Street, Deptford, London, S.E.

**LONDON, W.**—An Assistant required; outdoors; qualified preferred, but not essential; accustomed to good-class business. Apply, with full particulars, age, height, experience, and salary required, to W. A. Weston, 8 Sandringham Parade, Ealing.



**ONDON, W.**—Comfortable home offered to a good Assistant: capable, honest, and industrious; easy hours; quick and accurate; Dispenser; aged about 25; hours 8.30 to 9, Thursdays 1, Saturdays 10; 5 hours' duty Sunday, one in three. Apply, Gosworthy, 1 Baron's Court Road, West Kensington.

**MAIDSTONE.**—Qualified Assistant for good-class Dispensing and Family trade; duty divided between three. State age, height, experience, salary, reference, photo (railway fare paid at progressive salary to suitable gentleman, permanency), River, Chemist, Maidstone.

**MANCHESTER.**—Junior Assistant wanted; Suburban Dispensing business. Bates, Chemist, Brooks's Bar.

**MARGATE.**—Qualified Branch Manager for permanency, competent and trustworthy, about 30, for good-class Retail and Dispensing business; full particulars of last two engagements, height, and photo if possible, state salary; unfurnished rooms premises. W. M. Rosser, Baily & Co., 2 Ethelbert Terrace, Margate.

**NESTON.**—Junior Assistant (unqualified) required by firm of modern Store Chemists; good salary and every encouragement given to suitable youth. Apply, full particulars, Martyn's Stores, 21, 25 Queen Street, Wolverhampton.

**ST. LEONARDS-ON-SEA.**—Junior (outdoors) for Dispensing and General Retail business. State age and salary required, E. & Co., Pharmaceutical Chemists, Silverhill, St. Leonards.

**TOWMARKET.**—Mr. Gostling has a vacancy for a lady Assistant; used to Dispensing and Counter work; Minor or Hall qualification necessary; hours light, 8.30 till 7 three days, 7.30 to 9 two days, half-day Tuesday; no Sunday duty. Apply at once.

**WARWICK.**—Required shortly (indoors), for Dispensing, Light Retail, and Photographic (no practical), a gentlemanly Assistant; liberal terms to a careful and trustworthy man. Apply, stating age, height, salary required, with photo and references, J. K. Crossdale, The Pharmacy.

**WESTON-SUPER-MARE.**—Wanted, early in September, a qualified Assistant, about 28, accustomed to good-class Retail Dispensing; to live in with housekeeper. Send full particulars to Edwin Norman, Pharmaceutical Chemist, 35 High Street, Weston-super-Mare.

**WILLENHALL.**—Required end of September, a reliable Junior Assistant, 22 to 24 years, outdoors, for Dispensing and Counter work; liberal terms to a careful and trustworthy man; moderate salary. Apply, stating age, height, references, and salary required, H. Walker, Chemist, Willenhall, Staffordshire.

**WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.**—Wanted, male Assistant Dispenser; Minor qualification; salary £100 per annum, luncheon provided; hours 9 a.m. to 5 p.m. Applications, with recent testimonials and full particulars, to W. H. Harper, House Governor and Secretary, General Hospital, Wolverhampton.

**WORTHING.**—Assistant wanted, unqualified; permanent; good-class business. Send particulars, with references, to W. H. Harper, Pharmaceutical Chemist, Worthing.

**JUNIOR or Improver, about 20, requiring time for study; business high-class Dispensing and Retail; vacancy August 31; comfortable indoor berth, with private sitting-room and bedroom. Apply, with full particulars and photo if possible, F. Pettifer, 18, Fore Street, Taunton.**

**ABOUT August 17.**—A qualified man to manage a small Branch; permanency to a suitable man. Apply, with full particulars, J. & Riley, Ltd., Chemists, Bolton.

**ASSISTANT** wanted for N.H.I. Dispensing and Light Retail; board in if desired, sleep out. Apply, A. Fryer, 75 Nevill Stoke Newington, London, N.

**ASSISTANT** wanted, with good Dispensing and Counter experience; smart and capable. Apply, Messrs. Timothy White Co., Chemists, Portsmouth.

**ASSISTANT** wanted; good Dispenser; four weeks' engagement; outdoors. Apply, with full particulars, to Wing, Pharmacist, Lewis Street, Woolwich, S.E.

**ASSISTANT** wanted for August 15; outdoors; one accustomed to Light Retail and Dispensing business. Apply, with references, and salary required, to Llewelyn, Chemist, Cheltenham.

**COMPETENT** Assistant required for Dispensing business; qualified preferred. Nathl. Smith & Co., Cheltenham.

**DISPENSER (female)** wanted at the Southern Convalescent Fever Hospital, Dartford, Kent (under the Metropolitan Asylums Board). The person appointed must be a Licentiate of the Society of Apothecaries or duly registered under the Pharmacy Act (Major or Minor certificate of the Pharmaceutical Society). Persons holding only the Assistant's certificate of the Society of Apothecaries are not eligible. The person appointed will be required to perform certain clerical work for the Medical Superintendent, and a knowledge of Typewriting will be an advantage. Salary £120 per annum, rising by £7 10s. annually to £180; no increment until after four years' service. The Dispenser will be required to live in, and deductions amounting to £49 per annum will be made from the salary in respect of the emoluments provided.

Applications must be made on forms obtainable from the Clerk, Metropolitan Asylums Board, Embankment, E.C., to whom they must be returned not later than Wednesday, August 19th. Requests for forms made by post must be accompanied by stamped addressed envelopes.

5th August, 1914.

**DISPENSERS.**—A number of women Dispensers are required temporarily in connection with the pricing and examination of Chemists' Prescriptions. Applications, on foolscap paper, in the applicants' own handwriting, should state qualifications, experience, and age, and be accompanied by copies of not more than three testimonials, and forwarded addressed, 259/52, Office of this Paper.

**ELDERLY** qualified Chemist required; easy hours; work light. Reply, "Chemicus" (202/44), Office of this Paper.

**GOOD** position for able, energetic, up-to-date, qualified man, 35 to 40 capable of controlling staff (about 20), for established Manufacturing and Retail business in working-class district in the Midlands, where cheap Packed lines are sold in large quantities; may put in capital if desired, otherwise progressive salary or payment by results. Reply fully and promptly to 201/23, Office of this Paper.

**IMMEDIATELY.**—Unqualified Assistant, 25 to 30. Send photo, salary required (outdoors), references, to Purvis, M.P.S., F.S.M.C., Bridlington.

**JUNIOR or Improver** wanted; outdoors. Daniel, Chemist, Wood Green, N.

**JUNIOR** for first-class Country business, age about 20. State height, salary (outdoors), give experience, and if possible enclose photo, Wootton & Webb, Luton, Beds.

**LARGE** Firm have an opening in their Stocktakers' Department for a Junior, age about 21; one who has had Retail experience and possesses a fair knowledge of the cost prices of Chemists' stock preferred. State age, when at liberty, and salary required, "Stock" (202/45), Office of this Paper.

**LOCUM**, qualified, immediately; young, or suit elderly gentleman; August 10-September 12 inclusive; supervision principally; references essential. Butlers, 51 Sanvey Gate, Leicester.

**QUALIFIED** Branch Manager required by the beginning of October; one seeking a permanency preferred; house provided. State age, references, etc., to G. J. Lusher-Pentney, Pharmacist, 98 Queen's Road, Dalston, N.E.

**QUALIFIED** Assistant wanted for a Mixed Retail and Dispensing business; no Sunday duty; Junior kept. Please state age, reference, and salary required to Innes & Son, Chemists, Stalybridge.

**QUALIFIED** Assistant wanted; a knowledge of Dentistry and Optics preferred; business hours moderate; work easy. Apply, stating age, height, salary required, married or single, photo (to be returned), to J. W. Bodger, The Pharmacy, Hunstanton.

**QUALIFIED** Assistant wanted; N.H.I. Dispensing and Counter work. State age, salary required, two testimonials, to H. Mason, 5 Fleet Street, Pemberton.

**QUALIFIED** Junior for good-class establishment in the West of London. Apply, stating full particulars, to "Carbolic," c/o S. Maw, Son & Sons, 7-12 Aldersgate Street, E.C.

**QUALIFIED (Branch) Manager** wanted August 17 for permanency; outdoors; hours 9 a.m. to 10 p.m., Saturdays 11 p.m., with three hours on alternate Sundays; highest references essential; abstainer during business hours preferred; near London Bridge; state age, salary, etc., and if interview could be arranged. Apply, "Alembroth" (204/2), Office of this Paper.

**QUALIFIED** Junior. Give full particulars, age, height, salary required, and enclose photo if convenient, "Extract" (204/5), Office of this Paper.

**SMART** unqualified Junior wanted for Light Retail, Dispensing, and Photographic business; no evening or Sunday duty. Apply, giving full particulars as to age, height, experience, salary required (indoors), with references and photo, to P. R. Hill, Pharmaceutical Chemist, 90 High Street, Gorsestou.



**UNQUALIFIED**, married, no family, age 35 to 40, wanted for early August; obliging, trustworthy, capable Assistant; live on premises; abstainer preferred; must be quick; good Window-dresser, Salesman. Apply, Godfrey C. Wood, Penygarn, Pontypool, Mon.

**UNQUALIFIED** Junior Assistant wanted; outdoors; good at Counter. N.H.I. Dispensing, and the sale of Photographic goods; hours—four days from 8.50 a.m. to 9.30 p.m. with three hours off for meals, Wednesdays 8.30 to 1.30 p.m., Thursdays 10.30 a.m. to 10 p.m.; alternate Sunday evenings 6 p.m. to 10 p.m. Give full particulars by letter as to age, experience, references, salary required, if married, when disengaged, etc., to "Ph.C.," "Golden Key," 20 Norton Folgate, London, E.C.

**UNQUALIFIED** Junior (outdoors), or one requiring time for study; Light Country Retail, N.H.I. Dispensing. Apply, giving references, age, salary required, and when at liberty, 201/17, Office of this Paper.

**WANTED**, smart Assistant for a month or more; knowledge of Photography and seaside trade; send references, photo, and salary required (in- or out-doors). Apply, 5 Albert Terrace, Douglas, I.O.M.

**WANTED** immediately, a competent Assistant (male or female); qualified preferred; one kept; indoors; hours 8 a.m. to 8 p.m., Saturday 8 to 9 p.m. State full particulars and send photo (to be returned) to Blades, 10 Gloucester Road, South Kensington.

**WANTED** immediately, qualified Manager for good-class business in small town in Devonshire. Address, "C," c/o Evans, Gadd & Co., Ltd., Exeter.

**WANTED** at once, smart, unqualified, gentlemanly Assistant for good-class Mixed business in seaside resort; must be good Window-dresser; knowledge of Photography essential; easy hours; outdoors; permanency to suitable man. Apply, with references and salary required, to H. K. Duckworth, Chemist, Grange-over-Sands.

**WATER** Analyst wanted by Waterworks (Yorkshire); thoroughly capable of making Bacteriological and Chemical examinations; training and experience to be fully stated and wage required. Applications to 190, 11, Office of this Paper.

## WHOLESALE.

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**CHEMIST** required, with general, technical, and commercial knowledge and experience in the manufacture of soluble Fruit Essences, etc. State full particulars, salary, etc., to 46/62, Office of this Paper.

**HOUGH, HOSEASON & CO.**, Manchester, invite applications for Chief Clerk; knowledge of Drug business and up-to-date methods indispensable. State experience and salary.

**REPRESENTATIVE** required; must be good Salesman, energetic, and of good ability; full particulars and references must be given, otherwise no notice will be taken of reply. "Spatula," Box 79, c/o C. Mitchell & Co., Ltd., 1 Snow Hill, London, E.C.

**REPRESENTATIVES** (Drugs) having an established connection with Hospitals, Sanatoria, and Infirmarys are offered a non-competitive high-class Side-line; 10 per cent. commission; please send particulars of ground covered. Apply, 203/28, Office of this Paper.

**TABLET** Coater required; good wages. State experience and customary information, Timothy White Co., Ltd., Portsmouth.

## SITUATIONS OPEN.

(Colonial, Indian and Foreign.)

3s. 6d. for 50 words or less; 6d. for every 10 words or less beyond, prepaid. The Advertiser may, if preferred, have replies addressed to this Office, and forwarded on payment of an additional charge of 6d.

**BIARRITZ**.—Unqualified Assistant, single, with good experience and preferably some Continental knowledge; 250 francs monthly, with bed and breakfast; passage paid; must have good appearance. Apply to "A. L." (50/73), Office of this Paper.

**BOMBAY**.—Qualified Assistant wanted for a first-class private British firm of Chemists; age not over 30; three years' agreement; salary £200 first year, £220 second year, £240 third year; passage paid out and home by P. & O. steamship. Apply, with copies of testimonials and photo, to "R. L.," S. Maw, Son & Sons, 7/12 Aldersgate Street, London, E.C.

**FRANCE**.—Assistant; knowledge of French and Continental experience. Age, height, experience, and salary required to "Paris" (40/54). Office of this Paper.

**INDIA**.—Messrs. Bathgate & Co., Calcutta, require two Junior Assistants, with Minor qualifications; unmarried; age 21 to 26; passage paid both ways; four years' agreement; salary first year, monthly, Rs. 275 (about £18 6s. 8d.), second Rs. 300 (about £20), third Rs. 325 (about £21 13s. 4d.), fourth Rs. 350 (about £23 6s. 8d.). Apply, giving particulars of experience, etc., to Messrs. Alex. Lawrie & Co., 14 St. Mary Axe, London, E.C., who will be pleased to answer all inquiries.

**AN** English qualified Assistant Chemist wanted, knowing International Pharmacopoeia, speaking and understanding Italian; permanent appointment. Write, stating age, salary required, to the Anglo-American Supply Stores, Ltd., Via Cavour, Florence, Italy.

## SITUATIONS WANTED.

1s. for 12 words or less; 6d. for every 10 words or less beyond, prepaid.

The Advertiser may, if preferred, have replies addressed to this Office, and forwarded on payment of an additional charge of 6d.

### [HOME.] RETAIL.

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**AS** Manager to a good-class business; disengaged; highest references. Apply, 203/11, Office of this Paper.

**ASSISTANT**; good knowledge of Dispensing, Photography, and Counter work; height 6 ft.; good appearance and address; age 23; unqualified. Apply, "Rhei" (200/31), Office of this Paper.

**ASSISTANT**; 22; three or four months' engagement or permanency; good-class business; Dispensing, Counter, Photographic good references; tall; Midlands preferred. Mellor, 56 St. Giles Road, Derby.

**ASSISTANT**; 34; single; very good experience; Dispensing Counter, Window-dressing; commencing salary 35s. "Cascara" (202/21), Office of this Paper.

**ASSISTANT**; 27; outdoors; West End, South Coast experience excellent testimonials; London preferred. G. A. Vaisey, 9 Jameson Street, Notting Hill Gate, W.

**DISENGAGED** August 17; age 51; active; accustomed to quiet and accurate N.H.I. Dispensing. "Chemist," 29 This Avenue, Walthamstow, N.E.

**DISPENSER**; Doctors' and Hospital experience; abstainer; age 35; married. 29 Guildford Road, Brighton.

**DISPENSER**; whole or part time; good experience. "Dispenser," 58 Malvern Road, West Kilburn.

**EVENING** work; Camberwell, Peckham, Brixton or district put up stock, Counter work, etc.; age 24. "C," 3 Belair Street, Camberwell Green.

**EVENING** work; Pharmacy or Surgery; competent; disengaged August 16; daytime free next week. 203/37, Office of this Paper.

**EXPERT** Photographer; 22; situation to learn any part trade; experience with Chemist; good useful knowledge trade. Offers, 198/20, Office of this Paper.

**FIRST-CLASS** Salesman; punctual, active, obliging; good Counterman, Prescribing; last situation 2 years; disengaged September 30; 35s. weekly and commission; references. Card Beaconsfield, Bridlington.



**MEDIATE** Holiday relief offered Dispensers; August only; qualified (Hall); 20 years' experience; excellent testimonials; 2 guineas weekly (outdoors) and railway fare. Lloyd Smith, West Farleigh Vicarage, Maidstone, Kent.

**NIOR** requires situation, in Midlands preferred. Apply, stating salary, Pearson, 26 Station Street, Walsall, Staffs.

**NIOR** (free September 1) requires berth in high-class Pharmacy; N.H.I. and Counter experience; Extractor. Reply, stating salary, etc., to "Extractor," 10 Woodville Road, Cardiff.

**NIOR**; 23; total abstainer; excellent references; in London or large town. Evans, Tanybwlch Cottage, Bl. Festiniog.

**BY** Dispenser (Hall), experienced, knowledge Shorthand, Bookkeeping, requires post in London with Doctor or Insti-  
tute. "A., 57 Oxford Terrace, Hyde Park.

**CUM**, qualified; 25; disengaged; West-End experience. "Quinol," 5 Clara Street, Stoke, Coventry.

**CUM**, qualified; 49; first-class experience and references; disengaged September 13. Dewey, Turner's, Basingstoke.

**CUM**; August 10 to 22 inclusive. Wire, write, "Pharmacist," 26 Grasmere Road, Muswell Hill, N.

**CUM**; 23; disengaged 22nd until October; Harrogate, London experience; references really excellent. Harrison, Bartlett, Dist, Winchester.

**CUM**; age 39; qualified; disengaged August 8; best references. "M.P.S.," 72 Farringdon Street, E.C.

**CUM**, qualified; thorough experience; highest references. "Pharmacist," 351 High Street, West Bromwich.

**CUM**; disengaged until August 16; qualified. "Statim," 23 Mornington Crescent, N.W.

**CUM-TENENS**.—Pharmacists willing to pay for efficient service of reliable Locum write at once to Idris Lloyd Jones, 8, Anglesy House, Llanrwst, N. Wales.

**NIOR**; permanent; excellent all-round experience; disengaged; abstainer; good salary required. "Pharmacist," 2 Jennerley Road, Clapham Junction, S.W.

**NIOR** or Locum; qualified; exceptionally good all-round experience; most satisfactory references; town or country; highly reliable. "Statim" (204/8), Office of this Paper.

**NIOR** or Birmingham.—Wanted, permanency; 21; qualified; excellent references; Wholesale preferred. "Cito," 21 Milton Road, Handsworth, Birmingham.

**NIOR**.—Quick Dispenser, Light Retail, Photography, requires Locum or permanency; London preferred; outdoors; references; disengaged; unqualified. 46 St. Michael's Road, Not.

**NIOR** desired in good-class business by experienced assistant; 31; unqualified; good references. 203/3, Office of this Paper.

**NIOR** and Medical Student wishes to negotiate with qualified gentleman or where qualification is required; district; highest references. "Aspirin" (202/19), Office of this Paper.

**NIOR**, 22, with Continental experience, speaking French & German, slight knowledge of English, seeks situation in Pharmacy from September 1; terms moderate. Address, Em. Kautenbach, Luxemburg.

**NIOR**; Manager or Assistant in small comfortable business; 54; married, no children; 1½ year's Canadian experience; apply, "Chemist," 90 Lincoln Road E., Peterborough.

**NIOR**; Manager or Senior; all-round experience; Photography. "J. O. P.," 105 Hythe Road, Brighton.

**NIOR**; 32; tall; all-round experience, Scotch and London; Branch Managership; London or North England preferred. Full particulars, salary, "Scotch" (202/4), Office of this Paper.

**NIOR** man (25) desires position as Manager or Assistant; tall, gentlemanly; excellent references; disengaged shortly; S.E. Counties preferred. Thorne, c/o Rex Blanchford, Esq., 76 High Street, Wimbledon, S.W.

**NIOR**; Manager or Senior; up-to-date all-round experience; abstainer; London or Suburbs preferred. Apply, 202/16, Office of this Paper.

**NIOR**, age 39, as Manager; complete experience; good appearance; best reference; can commence at once; temporary or otherwise. "M.P.S.," 72 Farringdon Street, E.C.

**NIOR**; reliable, reasonable; Pharmacy, Institution. "Hall," 48 Handsforth Road, Clapham Road, S.W.

**NIOR**; 32; City or West End; permanency; excellent references; 4 weeks' notice to give present employer. "Aspirin," 248 Upper Tooting Road, S.W.

**NIOR** Assistant; 30; experienced; married; good references; disengaged August 24. "Salesman" (201/15), Office of this Paper.

**NIOR** (25) desires situation in the North; at liberty in October; honest, careful. 202/25, Office of this Paper.

**NIOR** as Manager (married, one child); to live on premises; excellent references; permanency; experienced. 202/37, Office of this Paper.

**NIOR** (23) desires situation; N., N.E. London preferred; time for study; 35s. weekly. 202/31, Office of this Paper.

**NIOR**; Manager or Assistant; moderate salary; comfortable permanency; accustomed sole control; excellent references; tall; 32; married, no family. "Abstainer" (203/10), Office of this Paper.

**NIOR**; evening work wanted; Dispensing or Surgery Attendant. "A.," 24 College Street, Chelsea.

## WHOLESALE.

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**NIOR**, 12 years' experience, seeks situation; excellent reference. "G. T.," 31 Manaton Road, Peckham Rye, S.E.

**NIOR** Chemist, with thorough knowledge of Drug trade, desires change; Representative of good firm or other responsible position. "Aspirin" (201/19), Office of this Paper.

**NIOR** or other responsible position; last 5 years with Messrs. Richardson & Co. (Leicester), Ltd. Heale, M.P.S., 144 Richmond Road, Montpelier, Bristol.

**NIOR**, experienced, desires to Represent good house; Drugs or Sundries; sound connection. 202/23, Office of this Paper.

**NIOR** and Despatch; 15 years Manager; well up all departments; good organiser; knowledge Essence trade; excellent refs. Foster, 67 Oakhurst Grove, East Dulwich, S.E.

## SITUATIONS WANTED.

(Colonial, Indian and Foreign.)

1s. for 12 words or less; 6d. for every 10 words beyond, prepaid. The Advertiser may, if preferred, have replies addressed to this Office, and forwarded on payment of an additional charge of 6d.

This heading is reserved for assistants seeking situations in the British Colonies, India, and Dependencies or elsewhere abroad.

**NIOR**; 24; smart, active; experienced Dispenser and Retailer; speaking Italian, French; disengaged September 15. "Essence" (193/33), Office of this Paper.



## MISCELLANEOUS.

**MADAM & TUCKNISS**, Sharedealers, Bank Chambers, Blackheath, S.E. Established 1898. Telephone 81 Lee Green.

Shares for Sale (free of commission, subject).—200 British Oxygen, 44s.; 50 Lewis & Burrows 5 per cent. Preference, 13s. 3d. (full year's dividend due November); 200 Veno Drug, 18s.; 100 St. Ivel Preference, 17s. 3d.; 40 Dental Manufacturing, 106s.

Wanted (subject).—120 Wright Layman, Preference, 20s. 9d.

List of Shares for Sale and Wanted sent free on application. Every effort made to effect business for Buyers and Sellers in all Stocks and Shares. Bankers, London County and Westminster.

### WALTER WADE DECEASED.

Pursuant to Statute 22 and 23 Vic. cap. 35.

**NOTICE TO CREDITORS.**—All persons having claims against the estate of Walter Wade late of 55 High Street Sidcup Kent Pharmacist who died on 28th May 1914 and whose Will was proved in the Principal Probate Registry on 27th June 1914 by Elizabeth Elcanor Wade Widow and Arthur Thomas Girdler the executors are hereby required to send particulars of their claims to the undersigned on or before 11th September 1914 after which date the executors will distribute the Estate having regard only to the claims of which they shall then have had notice.

Dated 28th July 1914.

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Fig. 1.

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Fig. 3.

Fig. 2. THE COVERALL COAT, in Khaki, detachable buttons, 45 in. long, 6/6 post paid.

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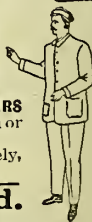


Fig. 4.

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Fig. 2.

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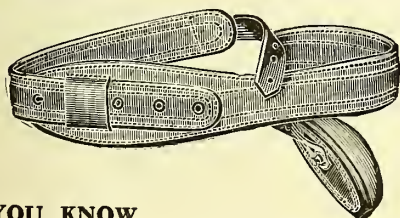
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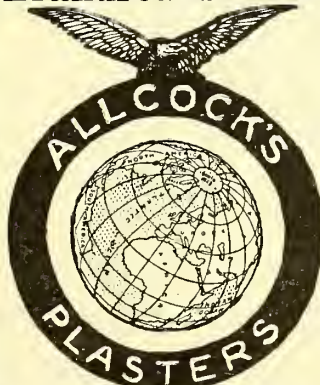
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
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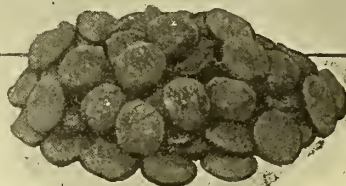
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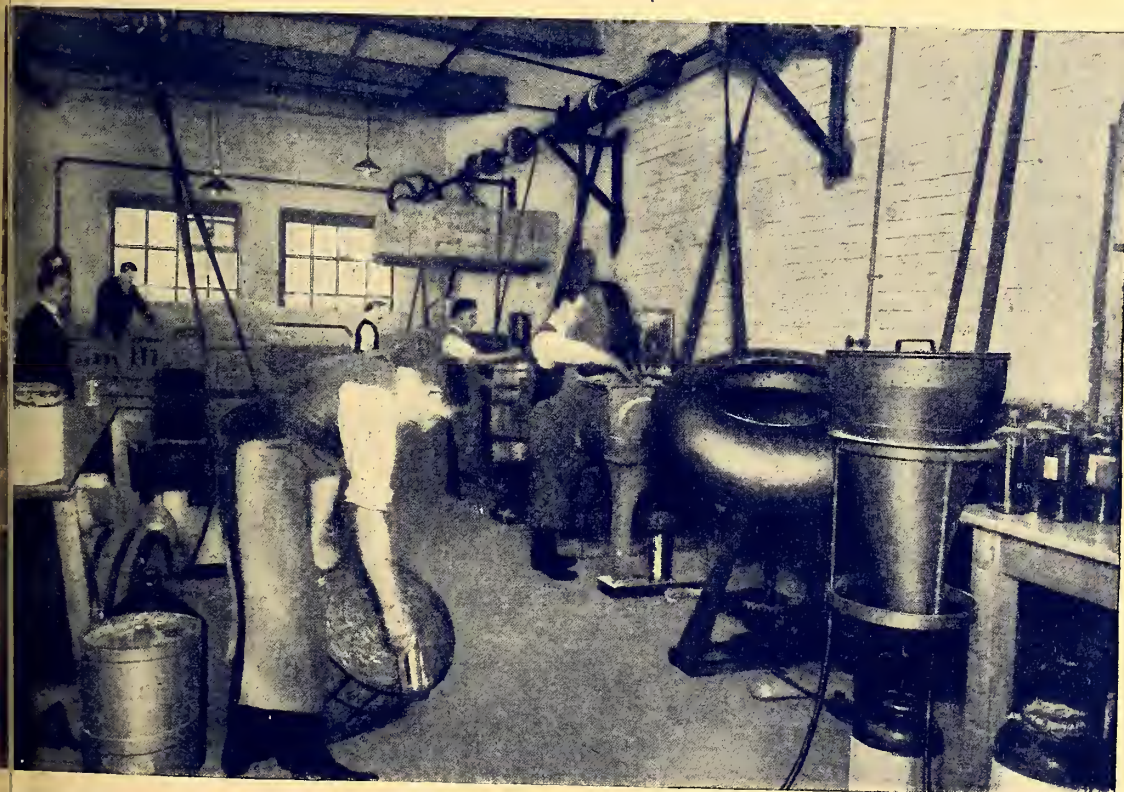
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